ADMINISTRATION OF DESIGNED SERVICES

DESCRIPTION

GENERAL METHODS

1. GENERAL

1.001 This addendum supplements Section 010-505-100, Issue 2. Place this pink sheet ahead of Page 1 of the section.

1.002 This addendum is issued for the following reasons:

(a) To change the section title.

(b) To revise paragraphs 1.21, 1.22, 1.28(d), 2.10, 2.81, 2.84, 3.48, 3.68, 5.108, 5.117(d), 5.118, 5.120(b), and 5.121 to provide clarification and updates to section.

(c) To revise definitions of EIRD, CEIRD, DLRD, RID, RAD, FCD, SWC, and IAD in Part 6, B(c).

(d) To add definitions for LAM, WOT, and CTA in Part 6, B(c).

2. CHANGES TO SECTION

2.001 On Page 1, the title is changed as follows.

(a) Line 1 should read: Administration of Designed Services.

(b) Line 2 should read: Description.

(c) Line 3 should read: General Methods.

2.002 On Page 6, revise the first sentence of paragraph 1.21 as follows:

A BOC ADS Methods Steering Committee is established on the headquarters staff of each BOC to coordinate overall management and implementation of policy decisions for special service, message, routing, and carrier provisioning.

2.003 On Page 6, revise the first sentence of paragraph 1.22 as follows:

The AT&T Special Services Working Committee reports to the Special Services Operations Board and is responsible for ongoing development of Special Services standards.

2.004 On Page 6, delete the last sentence of paragraph 1.22.

2.005 On Page 7, revise the last sentence of subparagraph 1.28 (d) as follows:

(d) Standards for other special services have been established on a provisional basis.

2.006 On Page 8, change "been completed" in the next to the last sentence of paragraph 2.10 to "passed."

2.007 On Page 15, revise the next to the last sentence of paragraph 2.81 as follows:

Standard intervals and procedures for intra-area special services have been established on a provisional basis.

2.008 On Page 15, delete "and DVA" in sentence six of paragraph 2.84.

2.009 On Page 22, change "the recommended" in the second sentence of paragraph 3.48 to "a."

2.010 On Page 25, change "Services" in the third listing under paragraph 3.68 to "Marketing."

2.011 On Page 25, change "measurements" in the second sentence following the first listing of paragraph 3.68 to "measurement analysis."

2.012 On Page 52, change "222" in the last sentence of paragraph 5.108 to "ZZZ."

2.013 On Page 54, in the last listing of subparagraph 5.117 (d), change "Z" to "ZZ."

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2.014 On Page 54, revise paragraph 5.118 as follows:

Portions of the preceding information (eg, the intermediate scheduled dates and/or responsible groups) may be determined by the control system from other parts of the input as previously described.

2.015 On Page 54, change "Reschedule" in subparagraph 5.120 (b) to "Due Date."

2.016 On Page 55, change "Reschedule" in the fourth line of paragraph 5.121 to "Due Date."

2.017 On Page 60, make the following additions and revisions to listings under Part 6, B(c) Supplemental Date.

EIRD is revised as follows:

EIRD (Engineering Information Report Date) - The date on which the Control Design Group is scheduled to receive an EIR from Local Control Design Groups (critical date).

Immediately following **EIRD**, add **LAM** to read as follows:

LAM (Loop Assignment and Make-up) - The date by which loop assignment information and the loop make-up when required is transmitted to the appropriate work groups (critical date).

Following **LAM, CEIRD** should be revised as follows:

CEIRD (Confirming EIR Date) - The date on which the Control Design Group should complete all coordination required with local design control groups to resolve circuit design discrepancies and to complete all changes in local designs.

2.018 On Page 61, make the following additions, deletions, and revisions to listing following Part 6, B(c) Supplemental Date.

Under **DLRD**, change "designed" to "designated."

RID is revised as follows:

RID (Records Issue Date) - The date on which the ECO/LECO is to send WORD to all implementation groups (critical report date). This is also the objective date for other involved assign/design groups to send documents to all implementation groups.

Under **RAD**, delete "a minimum of" in the last sentence of the paragraph.

Immediately following **MOJ**, add **WOT** to read as follows:

WOT (Wired and Office Tested) - The date by which intracentral office wiring is to be completed, all plug-ins optioned, aligned, and frame continuity established, and the interoffice facility sections (as applicable) tested by the responsible work groups. In addition, the switching equipment, including translation loading, shall be installed and tested by the responsible work groups (critical date).

FCD is revised as follows:

FCD (Frame Continuity Date) - The date on which frame through frame continuity is assured, by appropriate tests, and the local distribution facility, if applicable, is present to the extent it can be determined (critical report date).

Immediately following **FCD, CTA** is added and reads as follows:

CTA (Circuit Tested and Available) - The date on which demarc to demarc testing is completed (critical report date).

SWC is revised as follows:

SWC (Schedule Work Completion Date) - The negotiated date used to plan work completion associated with projects for load leveling purposes. Whenever SWC is used, a Due Date must also be scheduled to support billing inventory and customer acceptance of the service (critical report date).

IAD is revised as follows:

IAD (Inventory Available Date) - The date on which equipment and facilities are disconnected and made available for reuse (critical date).

ADMINISTRATION OF DESIGNED SERVICES
PROCESS SPECIFICATION

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1. GENERAL

DESCRIPTION

1.01 This section describes the Administration of Designed Services (ADS) standards and presents general information basic to an understanding of the overall objectives and structure of ADS. ADS is a set of Bell System standards for processing and control of orders to add, disconnect, change, or rearrange special service circuits and groups, or rearrange special service circuit and groups, message trunks and trunk groups, and carrier facilities and facility groups. ADS specifies a set of concepts, principles, and requirements for the processing and control of orders from preparation through completion.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

1.03 ADS establishes administrative responsibility and control of work functions which must be coordinated. The functions required and the necessary administrative process control are specified, but not the means to accomplish the work functions.

1.04 The intended users of this document are American Telephone and Telegraph Company (AT&T), Bell Telephone Laboratories (BTL), and Operating Telephone Company (OTC) system design and methods staff personnel. It provides a means for developing requirements for mechanized systems and more detailed methods and practices. The actual field implementation of ADS will be accomplished through use of other AT&T practices such as Section 010-520-ZZZ for Intercompany Services Coordination Plan (ISC) orders or through other practices (for other categories of orders) based on the ADS principles and concepts presented herein.

PURPOSE

1.05 The aim of the Bell System is to provide service in direct response to individual customer requirements or in response to aggregate customer demand on the network in a timely and efficient manner. For a significant amount of service provisioning, the coordinated activity of many widely separated offices, departments, and companies is required. ADS provides processing standards for these orders, specifically special service, message trunk, and carrier; although the methodology can be extended to include a wider universe of orders.

1.06 The basic objectives of ADS are:

(a) To help meet due dates and help alleviate inefficiencies associated with processing and control of orders which require the coordinated activity of many diverse work groups performing interrelated functions

(b) To build a foundation for planning, design, and operation of mechanized systems supporting the order process.

CATEGORIES OF ORDERS

1.07 ADS is concerned with orders which commonly require design activity or which require special handling (for example, tariff requirements,

marketing policy, etc). Three basic categories of orders are identified:

- Special (ISC and ADS-S/S)
- Message
- Carrier.

1.08 ***Special service*** orders are a subset of all orders written to add, disconnect, or change S/S circuits as defined in Section 795-402-100. Those included in ADS are described in the following paragraphs.

1.09 All ***message trunk*** orders are within the scope of ADS. Message trunk orders are generated by Trunk Administration to add, disconnect, or change circuits or groups in the message network.

1.10 All ***carrier*** orders are within the scope of ADS. A carrier system is a set of available channels created by interconnecting existing facilities, channel banks, multiplex units, and central office repeaters.

1.11 A subset of the above three are design orders. (Design orders were formally known by various names such as Engineering Service Order, Circuit Order, etc.) All design orders are within the scope of ADS. Design orders are those generated by the Circuit Provision Bureau (CPB), Network Administration, etc, to rearrange or redesign existing message trunks (groups), special service circuits (groups), or carrier facilities (facility groups) without affecting the service which the circuits or facilities provide. Examples are rearrangements to make facilities available or to achieve load balance.

STRUCTURE

1.12 There are four distinct processing structures within ADS. Their processing standards are characterized by the administrative area concept used and the class of orders covered. They are:

- Special Services—ISC
- Special Services—ADS-S/S
- Message
- Carrier.

A. ISC Special Services

1.13 The ISC structure establishes process and control requirements between and within an OTC operating area. The class of orders covered by ISC procedures are:

(a) All interoperating area and/or intercompany special service orders

(b) All intraoperating area special services negotiated in another operating area

(c) All special services with points in an independent telephone company

(d) All special services which connect with other common carriers (OCC)

(e) All special service orders for data services

(f) All design orders affecting circuits installed under (a), (c), (d), or (e) above.

B. Special Services—ADS-S/S

1.14 The special services—ADS-S/S structure establishes process and control requirements within an OTC operating area. The class of orders covered by special services—ADS-S/S procedures are:

(a) All special services which are Specially Installed and Maintained Services (SIMS) Type 1 and are not covered under ISC procedures are in this category. All SIMS Type 1 are assumed to be designed, and they are determined using the service code portion of the Common Language Circuit Identification (CLCI) on the order. (The specification of the SIMS Type 1 service code table is an OTC responsibility.)

(b) All other services which are not SIMS Type 1 but which are designed must follow ADS procedures. These are noted by the abbreviation ADSR on the Universal Service Order (USO). Some of these orders are SIMS Type 2 and some are non-SIMS. (The portion of ADSR orders which are SIMS Type 2 can be determined by using the service code on the CLCI. The specification of the SIMS Type 2 service code table is an OTC responsibility.)

(c) All orders for special service circuits not written using a USO are included within ADS.

(d) All design orders affecting circuits installed under (a), (b), or (c) above or under 1.13(b) in the ISC structure.

C. Message Trunk

1.15 The message trunk structure establishes process and control requirements between and within a message area. A message area is defined by the scope of responsibility of a single Trunk Administration group. A message area is not necessarily coincident with an OTC operating area. All message trunk orders and design orders affecting message trunks, whether intra or intermessage area, are covered by a common processing standard.

D. Carrier

1.16 The carrier structure establishes process and control requirements for carrier orders. The definition of a carrier area and the specific class or classes of orders covered are currently being developed.

ORGANIZATIONAL RESPONSIBILITIES

1.17 The ***ADS Methods Steering Committee*** is responsible for overall management and policy decisions for ADS. Included in this responsibility are the ISC plan, special services—ADS-S/S, message, and carrier standards. This committee is an interdepartmental group established at AT&T Headquarters including Long Lines, Western Electric, and BTL representation. The AT&T Engineering member chairs the committee.

A. Special Services

1.18 The ***ADS Special Services Working Committee*** reports to the Steering Committee and is responsible for producing and revising ISC and special services—ADS-S/S standards and practices. It also is responsible for reviewing OTC performance as measured by the ISC plan and other special service measurement plans. This committee serves as the system contact with the OTC special service—ADS-S/S contacts, the ISC administrative teams, and the Long Lines Headquarters ISC committee. The Working Committee is an interdepartmental group including AT&T, Long Lines, Western Electric, and BTL representation. The AT&T Marketing member chairs the committee.

1.19 ISC administrative teams are established at the headquarters staff of each OTC and Long Lines to coordinate the overall ISC administrative responsibilities for its company or area. Each team consists of a representative from each of the Marketing/Sales, Bell-Independent Relations (B-IR), Engineering, Plant, Business Services Departments, and Western Electric, and are augmented by other departments as required. Members are listed in the ISC directory.

1.20 An OTC ADS local special contact is established at the headquarters staff of each OTC to coordinate overall ADS local special service administrative responsibilities and interpret matters of policy within a company.

B. Message Trunk

1.21 The ***ADS Message Working Committee*** reports to the Steering Committee and is responsible for producing and revising ADS message standards. This committee serves as the system contact with OTC ADS Message Committees. The Working Committee is an AT&T interdepartmental group including BTL representation. The AT&T Network Trunk Administration member chairs the committee.

1.22 The OTC ADS Message Committee is established at the headquarters staff of each OTC consisting of departmental representation paralleling the AT&T Message Committee. This committee coordinates overall ADS message administrative responsibilities and interprets matters of policy within a company.

C. Carrier

1.23 The ***ADS Carrier Working Committee*** reports to the Steering Committee and is responsible for the development of carrier order procedures. The AT&T Engineering member chairs the committee.

DOCUMENTATION STRUCTURE

1.24 To achieve the basic objectives of ADS, six major documentation elements have been identified, not all of which fall under the formal

ADS Bell System Practice (BSP) documentation layers.

1.25 This document, the ***ADS Process Specification,*** provides a set of concepts and operational requirements at a functional level for processing and control of ADS orders. The remaining documentation elements, as illustrated in Fig. 1 are:

(a) ***Detailed methods and practices*** which have been established to provide guidance to OTC personnel. Currently available detailed methods and practices include the ISC BSP layer and the special services—ADS-S/S BSP layer.

(b) ***Forms*** requirements have been established specifying standard forms or interface documents. The purpose of these standards are to provide a uniform means of communication among the operating elements of the order and control process.

(c) ***Interval guides*** are used in negotiating customer due dates and in establishing benchmarks for order control. Intervals for ISC and OCC orders are established on a centralized basis. Standards for special services—ADS-S/S, message trunk, carrier, and design orders are set currently by individual OTCs.

(d) ***Measurement plans*** are a means of accomplishing provisions for a formal measurement of service provisioning performance. Currently plans exist for special services only. A message trunk measurement plan which will encompass the provisioning process as well as service performance is under development.

(e) ***System requirements*** are for mechanized systems which support the service provisioning process which are established based in part upon ADS concepts. Examples of these are system requirements on TIRKS, PICS, TNDS, RBCS, TIRKS-CMS, TIRKS-RBCS, service order processors, etc.

2. CONCEPTS

2.01 In this division basic concepts are presented. The fundamental ADS concepts fall into three categories:

(1) Orders

(2) The functions necessary to process orders

(3) The administrative structure necessary to control the order.

These concepts provide a basis for the ADS process requirements presented in Part 3.

ORDER

A. Orders and Order Documents

2.02 ADS is concerned with the processing and the administrative control of an order. An order is an authorization to perform work which is given by the requestor.

2.03 For message trunk, carrier, design, and non-USO special service orders; there is only one order document written to represent the order. For special service orders written using USO or ISC/USO, the order may result in more than one ***order document.***

2.04 If there are multiple order documents, one of them is the primary order which has associated with it a primary order number. This primary order number can be used to refer to the order as seen by the requestor. For example, those special service orders which fall under the ISC plan have an ISC/USO which is their primary order and local translated USOs which are written in each company area with a circuit location (CKL). Each local translated USO is complete with related order (CRO) to the ISC/USO. All of these documents are processed and tracked simultaneously by ADS as one order, and they may be uniquely correlated using the ISC/USO number (the primary order number in this case).

2.05 Related orders (represented by another primary order) may also exist which are associated with the primary order under consideration. Related primary orders are not always completed together and would not be marked as CRO. Fig. 2 graphically shows the interrelationships of order documents for related primary orders and local translated orders. For the remainder of the discussion, one primary order with local translated orders (which are CRO) will be assumed.

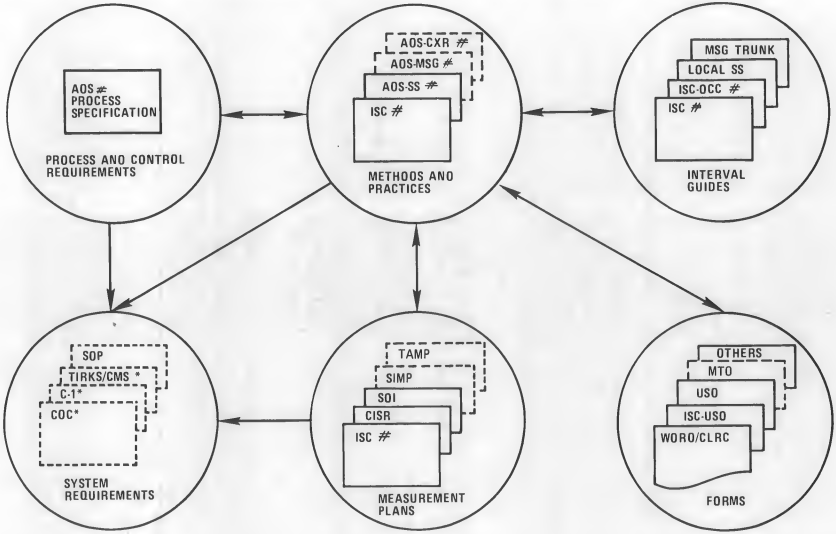


Fig. 1—ADS Documentation Structure

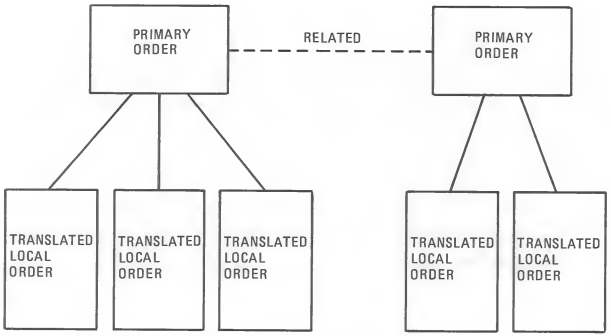


Fig. 2—Orders as Seen by the ADS Process

B. Classification

2.06 An ADS order is categorized by two factors:

(1) The type of circuits (circuit group, derived facility, or derived facility group) it affects

(2) The originating authority.

Figure 3 illustrates the classification of orders using these two factors. There are three types of circuits: special service, message trunk, and carrier. Orders for an add, disconnect, or change of these circuits or information associated with the circuits results in a special service, message trunk, or carrier order, respectively. These orders are originated by Marketing/Business Office, Business Services, Trunk Administration, etc. Orders originated by the CPB or other design group to rearrange special, message, or carrier circuits are called design orders. These affect only the internal description of a circuit or group and not the service which it provides.

C. Supplements

2.07 Between the time an order is placed and completed, changing circumstances may cause the authorizer to change the order. Consequently, for all types of orders, the concept of an order supplement exists. An order supplement is issued to correct, change, or cancel the original order.

2.08 The structure of the primary order number contains a suffix to be used for supplements. For each order supplement, the supplement suffix of the primary order number is incremented by the authorizer.

2.09 From a processing viewpoint, supplements fall into four categories:

(1) ***Modify***—a change in service requirement with or without a due date (DD) change

(2) ***Cancel***—a cancellation of an order or of one or more circuit activities on an order

(3) ***Reschedule***—a change in DD without a change in service requirement

(4) ***Other***—a change in order data other than DD or service requirements.

For the first two categories, the work in progress is stopped and the previous work functions are

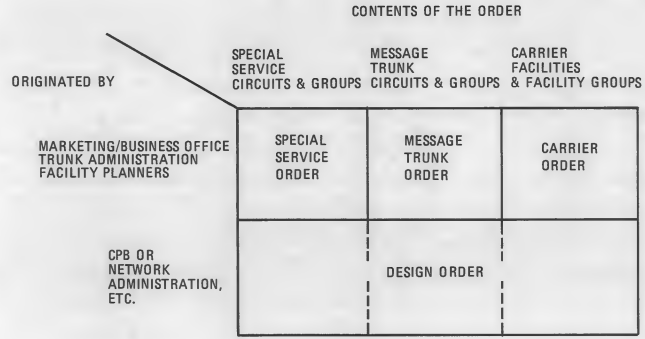


Fig. 3—Classification of ADS Orders

redone reflecting the changes or cancellations. The third category of supplement only affects the schedule for performance of functions which have not been completed. The last category of supplement does not affect the order processing functions.

D. Work Activity Hierarchy

2.10 The various people involved in an ADS order look at it from different points of view. The views are:

(a) A request for installation, change, or removal of service

(b) A description of the circuit activity needed to provide the service

(c) A description of the interconnection of facilities and equipment needed to form the circuit.

2.11 To the customer, the order is for service—either requested directly or expressed via network usage. The realization of that service request in terms of circuit action is immaterial to the customer. However, the service requirements must be translated into circuit activity requirements. The circuit activity requirements are expressed in the form of an external description of the circuits and the required action (add, disconnect, or change) for each.

2.12 Each of the circuit activity requests is expanded to a specification of work involving interconnections of equipment and facilities. The plant force adds, changes, rearranges, or disconnects the circuits based on this internal specification. The resulting circuits then provide service to the customer.

2.13 In addition to orders generated by customer demand, orders are generated by the company for circuit rearrangements which do not affect the external view of the circuits. Consequently, the service which the circuit provides is not affected.

2.14 The discussion above is oriented toward circuits. Both message trunk orders and special service orders can require circuit group activity (for example, a change of peg count register, route relay, etc). In addition, carrier orders result in activity on derived facilities or derived facility groups.

2.15 The three points of view noted in 2.10 translate to three levels of detail in describing order activity—as orders, items, or equipment/facility work at circuit work locations.

Items

2.16 An ***item*** is either a circuit, circuit group, derived carrier facility, or derived facility group and an associated ***action code*** specifying what must be done to the circuit. An ADS order must have at least one item and may have multiple items associated with it.

2.17 The item action codes used in ADS are as follows:

(a) ***A (Add)***—Create a new circuit. The addition of a new circuit group is achieved by adding the first circuit to the group.

(b) ***D (Disconnect)***—Remove an existing circuit from service. To disconnect a circuit group, each of the circuits in the group are individually disconnected.

(c) ***C (Change)***—Modify the external description or name of a circuit. For message trunks, a change of the group portion of the common language identification in which retention of traffic history (via the same trunk group serial number) is desired. In addition, the internal configuration of the circuit may be simultaneously changed (ie, rearrangement) under this action code. Associated with a change action, the item must be identified with both an old and a new circuit identification (CKT).

(d) ***R (Rearrange)***—Modify an existing circuit by a change of equipment, facility assignment(s), or of circuit design without affecting the service provided by the circuit. The name of the circuit CKT remains the same except the trunk number portion of a message trunk circuit ID may be changed.

(e) ***RG (Rearrange Group)***—A change of equipment or routing at the circuit group level which does not uniquely affect any particular circuit in the group.

(f) ***AK, DK, CK, RK (Cancel)***—The previous item action was canceled as a result of a supplement. The specific action code used has K appended to the first character of the previous action code. The circuit (or group) details reflect the desired circuit condition after the cancel; ie, prior to the pending action.

(g) ***P (Administrative)***—A change in administrative data for a circuit or group without changing the physical layout.

These action codes should not be confused with the USO order types (New, To, Disconnect, From, Change, etc) or the USO action codes of In, Out, etc, which apply to individual service or equipment items. The item action codes are designations given to the circuit or circuit group as a whole. In particular, the ADS item action codes represent those used on the work order record and details/circuit layout record card (WORD/CLRC).

2.18 The purpose of action codes is to classify circuit/group activity. They are used later in the control system for statistical and measurement purposes. They are not intended to supply information about whether inventory is used, whether design work is required, or whether implementation "tool work" is required. In fact, the presence of a "tool work" requirement varies from location to location on a circuit and is specified by equipment/facility action codes on the WORD/CLRC circuit details.

2.19 The action codes which can be used for the items associated with an order are dependent on the classification of the order. Special, message, and carrier orders can be originated only with action codes of A, D, and C. Design orders, however, may only have items with action codes of R or RG.

2.20 A message trunk order cannot result in both add and disconnect items. Otherwise, any mix of item action can result from an ADS order.

2.21 Order supplement in the Cancel category affect the action codes associated with some or all of the items on the order. No other order supplements affect item action codes.

Equipment/Facility Work at Circuit Work Locations

2.22 A ***circuit work location*** (CWL) is any location (circuit termination or intermediate office) at which work is required to satisfy the

circuit activity requirement expressed by the item. The word circuit is used loosely since the item may be activity requirements for a circuit group, derived facility, or facility group. For circuit group and facility group items, work is required only at the circuit terminations.

2.23 The work at CWLs is expressed in terms of the equipment/facilities which are to be added, disconnected, or reused.

2.24 Figure 4 graphically shows the hierarchy of activity levels. Note that the work activity hierarchy is a design and implementation concept and not an order writing concept.

E. Orders and Work Documents

2.25 For ADS orders, WORD/CLRC is the principle work document for plant forces in performing the implementation function. For special services, the USO is also used as a work document at circuit terminations. In addition, other work documents such as station diagrams, routing/translation information, sketch, etc, may be used.

2.26 WORD/CLRC information is used for two purposes—for order implementation and for on-going maintenance. Consequently, distribution of WORD/CLRC is done in two modes:

(1) As a work document for order implementation

(2) An an information document to convey circuit/group data for plant maintenance.

2.27 When distributed for order implementation, WORD (or its equivalent in the form of CLRC plus an authorizing document) is composed of the following parts:

- Work authorization
- Circuit details
- Test details.

The issuance of WORD/CLRC in this mode (ie, including a work authorization) requires an active order.

2.28 When distributed to convey circuit/group information on a post-completion basis, WORD/CLRC has no work authorization portion. Only the circuit details and test details are sent.

2.29 Every ADS order (except special ISC nondesigned orders) requires the generation or modification of circuit records and the distribution of WORD/CLRC.

F. WORD/CLRC Supplements and Reissues

2.30 After WORD/CLRC issuance and before order completion, WORD/CLRC may be changed by a supplement or reissue. WORD/CLRC supplements are required when an order supplement changes the original service requirements for an item. A supplement suffix for the item number is incremented by the Engineering Control Office (ECO) for any items for which the service requirements

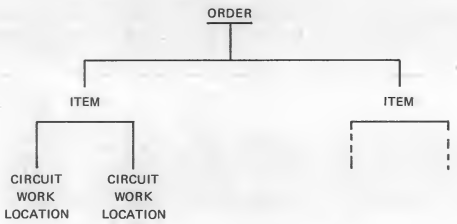


Fig. 4—Work Activity Hierarchy

were changed. WORD/CLRC reissues are used to incorporate all other changes into WORD/CLRC.

2.31 After initial WORD/CLRC issuance, every order supplement requires that a subsequent WORD/CLRC supplement or reissue be generated. The WORD/CLRC supplement or reissue may include the effect of one or more order supplements and other changes.

2.32 A WORD/CLRC supplement requires an order supplement in the Modify or Cancel category. A WORD/CLRC reissue may be released without an order supplement.

G. Completion of Orders and Items

2.33 For special services, an order represents an agreement with the customer for a unified service package. Regardless of the number of items, a special services order is treated as a unit, since the customer requested the service as a unit. This implies that all the basic functions, and in particular completion/record update, must be done on an order basis.

2.34 If only part of a special service order is finished and the customer agrees to accept a partial order, then a correction to the initial order is written to delete the unfinished portion. The deleted portion may be placed on a new order. The corrected initial order can now be completed.

2.35 Message trunk orders, on the other hand, may be completed on an item basis. Usually, all the items on a message trunk order are completed at the same time, and there are cases when completion as a unit is required. However, some cases require partial completion of a message trunk order; ie, completing one or more items.

FUNCTIONAL

A. Basic

2.36 Figure 5 presents the basic ADS process. There is a sequential flow of basic functional operations which make up the process and a control function which spans most of the operations. In addition, there is a communication function which is used by the process for coordination and the distribution of information (eg, documents, machine data, telephone conversations).

2.37 The initial function is ***authorization/order preparation,*** the output of which is order documents. For message trunks, trunk servicing determines the need for new trunks/groups via analysis of network traffic data and issues a message trunk order (demand). Message trunk orders (planned) are also written to implement forecasted requirements. In the case of tariffed special services, sales or business office personnel negotiate with the customer who agrees to purchase a service. A service order is then written specifying the service requirements and the circuits/groups necessary to provide the service. Other classes of orders are originated similarly. In summary, the output of the authorization/order preparation function is a description of the order in the form of order document(s) which is to be satisfied by the addition, change, or deletion of circuits or groups.

2.38 Once the order is issued, the ***design*** function is performed. Design in this context means the complete process of circuit engineering including interoffice routing, overall circuit design, facility and equipment assignment and preparation/distribution of work documents. The output of this function is the delivery of a set of work documents and equipment to the plant forces.

2.39 The ***implementation*** function includes the central office work, the station installation work, and the test of the circuit(s) and finishes with turn-up for service and completion reporting. Output from this function is completion notification including test results and change notification (reflecting differences in work document information and the actual installation).

2.40 The final function in the ADS process is ***completion/record update*** which insures that the change in service and circuits is reflected in the applicable records. This includes notifying authorization/order preparation groups, updating the inventory and circuit records, and initiating operations records update (such as service upkeep, network trunk administration, customer services, and directory records).

B. Levels

2.41 Each of the basic functions defined in the previous paragraphs has activity at various levels. For a given function, there are some activities which are performed only once for the item (or order). For example, end-to-end test of

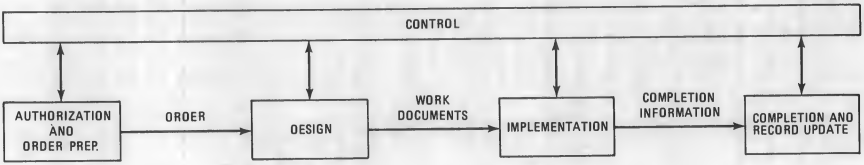


Fig. 5—A Basic Functional View of the ADS Process

a circuit during the implementation function is an item level activity. Similarly, preparation of the primary order is an order level activity. Other activities are done in parallel by each local responsible work group involved. An example of this is the assignment of equipment (including plug-ins) and facilities during the design function. This is a local level activity.

2.42 For each basic function, the three levels—order, item, and local—establish a hierarchy of things which must be done. At each level, there may be many items of a lower level associated with it. Each order level function has one or more item level functions which must be done to complete it. Similarly, each item level function has one or more local level functions which must be done to complete it. Once an order level basic function is completed (for example, design), the next basic function (implementation) is begun.

2.43 These functional levels are related to the physical activity levels—order, item, and equipment/facility work at a CWL—defined previously. The order and item functional levels for each of the basic functions—order preparation, design, and implementation—relate directly to the corresponding physical activity level. The local function level for a basic function (eg, design, etc) relates to CWL activity via the number of CWLs for which the group is responsible.

2.44 The definition of responsibility for performing the activities at each of the functional levels is examined in the following paragraphs.

ADMINISTRATIVE RESPONSIBILITY

A. Control Groups, Responsible Work Groups, and Other Work Groups

2.45 ADS is concerned with who is administratively responsible for performing the work on an order rather than with who actually performs the work. Two levels of ADS administrative responsibility are defined: control responsibility at the order level, and local responsibility covering a portion of the order for one or more CWLS.

Control Groups

2.46 Of the many work groups involved in a function, one of them must be responsible for the overall function. This includes responsibility for order and item level activities as well as coordinating all local level activities. This is achieved by designating a ***control group*** for each of the basic functions: authorization/order preparation, design, and implementation.

2.47 The responsibility for the final ADS function, completion/record update, is divided among the work groups for order writing, design, and implementation. The detail specification of this division of responsibility is given in the following paragraphs.

2.48 The control group for authorization/order preparation also has responsibility for the order as a whole while it is being processed.

2.49 Note the basic ADS assumption that the control group is responsible for both order and item level activities. The items on an order are closely enough related so as to require close coordination. Since one group is responsible for both levels, the two will be frequently combined into an order/item level in the discussion which follows.

2.50 Control groups are designated by the order originator using guidelines furnished by the involved department.

Responsible Work Groups

2.51 The groups (or groups aided by mechanized sytems) responsible for insuring that the local work is done are defined as ***responsible work groups*** (RWGs). RWGs are defined for each of the first three ADS functions: authorization/order preparation, design, and implementation. They are labeled by the primary function they perform. For example, in the design function each CPB involved in the circuit is a design RWG; and in plant there are many implementation RWGs responsible for implementation at the CWLs (office or customer premise). One implementation RWG may be responsible for only one CWL or it may be responsible for many (eg, a switching control center may be an implementation RWG). The designation of which work groups are RWG is dependent on an OTCs organizational structure and policies. The work associated with each CWL must be under the responsibility of only one RWG; however, an RWG may be responsible for work associated with more than one CWL.

2.52 The group designated as the control group for the function may also have local responsibilities and consequently may also be designated an RWG.

2.53 Groups designated RWGs are responsible for local level activity. They may assist the control group in performing the item/order level activities, but the control group is responsible.

2.54 In cases where independent companies are involved in an order, the RWG for all functions associated with locations in independent companies is the B-IR group.* Similarly, the Bell Point of Contact (BPOC) serves this function for OCC orders.

2.55 RWGs are defined for authorization/order preparation only for ISC orders where local translated USOs must be written.

2.56 Figure 6 provides an illustration of a circuit showing the responsibilities of the RWGs. The terminations of the circuit are illustrated by the solid dots (A and Z). The boxes (1 and 2) are intermediate offices through which the circuit passes.

2.57 For the sample circuit shown in the figure, the RWGs involved in each function can be determined as follows. For the design and implementation functions, there are RWGs covering each CWL. In the example, there are two design groups and four implementation groups. If authorization/order preparation RWGs are required, they are associated only with circuit terminations. In this example, there are two authorization/order preparation groups.

2.58 In summary, to determine all the RWGs associated with an order, the physical routing of the circuits through the CWLs must be known. Associated with each location (and depending on the type of circuit such as data, etc), an RWG is specified for each function. Finally, the number of distinct RWGs is determined by examining each circuit as a whole.

Other Work Groups

2.59 The RWG is the lowest level of administrative control with which ADS is concerned. Each RWG may have ***other work groups*** (OWGs) performing administrative and/or work functions to achieve completion of the tasks for which it is responsible. One or more OWGs may exist associated with any CWL for which the RWG is responsible. The particular structure of RWGs and OWGs is determined by the OTCs organization and practices. ADS specifies requirements for RWGs and the relationships between them. However, the structure of OWGs and the specification of their working relationships with each other and with RWGs is outside the scope of ADS. The ADS process also does not provide direction for physical circuit activity; eg, soldering, testing, etc.

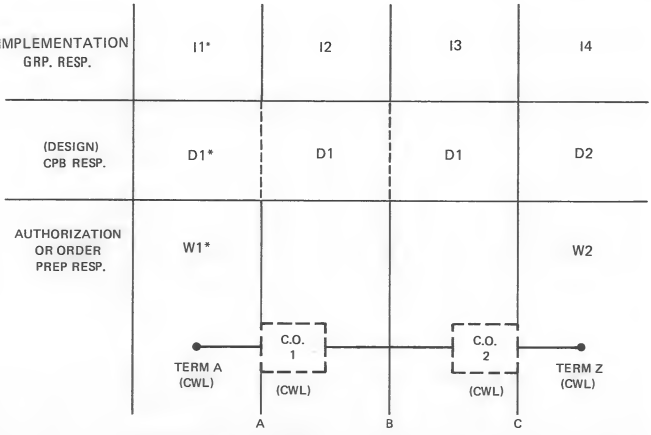
B. Circuit Routing and Its Impact on RWG Determination

2.60 When an order for a circuit is issued, only the circuit end points are required to be specified, leaving the routing of the circuit through intermediate offices to the design function. Referring to the example in Fig. 6, the authorization function specifies the two circuit terminations, A and Z, to the design function which then determines the intermediate offices 1 and 2.

2.61 The routing strategy becomes more complex when large geographic areas are involved, and consequently, more than one design group will be working the circuit. In Fig. 6, there are two design groups involved in the routing. If the interarea crossing at C is specified, then each design group can do its own routing within its coverage zone. In some cases, one group can do the complete routing job from A to Z given that they have routing table data covering both zones. The later case is not viable when extremely large physical boundaries are involved. For every circuit, there are fixed procedures defining how to route; however, the exact technique used depends on the circuit.

2.62 At the order/item level, there is a high level routing function which specifies, at a minimum, the boundary points between design groups. Then at the local level, there is a detail routing function which completes the routing, if required, within a design groups coverage zone.

2.63 One final point is the specification of additional RWGs during routing. During authorization/order preparation, the only RWGs required are those determined by circuit terminations. The authorization/order preparation RWGs pass order documents to the corresponding design RWGs. The process of circuit routing specifies intermediate CWLs which may require additional design groups.



* CONTROL GROUP RESPONSIBILITY FOR OVERALL FUNCTION

CWL = CIRCUIT WORK LOCATION

C.O. = CENTRAL OFFICE

NUMBERS = SEPARATE RESPONSIBLE WORK GROUPS

Fig. 6—Illustrative Circuit With Responsible Work Group Involvement

In that case, the design control group (which is performing circuit routing) is responsible for identifying and initiating activity in those additional design groups.

C. Abbreviations for RWGs and Control Groups

2.64 For brevity, standard abbreviations are assigned to the three types of RWGs and for those groups designated as control. These abbreviations are used extensively in this document.

2.65 Control group abbreviations are as follows:

FUNCTION	CONTROL GROUP ABBREVIATION
Authorization/ Order Prep	WCO (Writing Control Office)
Design	ECO (Engineering Control Office)
Implementation	ICG (Implementation Control Group)

2.66 RWG abbreviations are as follows:

FUNCTION	RWG ABBREVIATION
Authorization/ Order Prep	LWG (Local Writing Group)
Design	LDG (Local Design Group)
Implementation	LIG (Local Implementation Group)

2.67 Since one group may have both control responsibility and local responsibility, it can have two of the abbreviations attached to it (eg, may be both ECO and one of the LDGs). The name the group assumes in a particular reference is dependent upon the function it is performing.

D. Assignment of RWG and Control Responsibility

2.68 The establishment of candidate RWGs and procedures for specifying them for an order is generally an OTC responsibility. Guidelines and examples are provided in the following paragraphs to help firm up the concepts of RWG and control group.

Designation of Control Groups

2.69 The WCO is the order originator, and the group assigned as WCO varies with the class of order as shown in the following list:

ORDER CLASS	WCO
Special Services—ISC	Control ISC Team
Special Services—ADS-S/S	
USO	Marketing (Sales Office) if involved Business Office, otherwise
Business Services Traffic Order	Business Services
Others	Various Groups
Message Trunks	
MTO	Trunk Administration Group
Network Routing Order	Trunk Administration Group
Design Order	CPB or other design groups such as Trunk Assigner, Loop Assigner, etc

2.70 For all orders, the ECO is usually one of the CPBs involved in the circuits.

2.71 The designation of ICG for an order depends on the OTC organizational structure, the particular circuit/group affected by the order, and on the class of order. For special services, the ICG may be a Special Service Center (SSC), a Plant Service Center (PSC), or one of the central offices. For message trunks, the ICG is either an SCC, a No. 4 ESS-MAC (machine administrative center), or one of the terminating central offices.

Designation of RWGs

2.72 LWGs exist only for special service orders written using ISC/USO or USO. For ISC orders, the LWG is the local control ISC team.

2.73 For all orders, LDGs are CPBs involved with the circuits on the order.

2.74 The designation of LIGs for an order is dependent upon the OTC organizational structure, the particular circuits involved and the class of order. For special services, the LIG may be a Switching Control Center (SCC), an SSC, a PSC, or a central office. For message trunks, the LIG may be a No. 4 ESS-MAC, an SCC, or a central office.

E. Post-Completion Responsibilities

2.75 After work on the order is finished, the responsibilities of the ICG end; and the Plant Control Office (PCO) assumes responsibility for the ongoing maintenance of the active circuits/groups. Frequently the ICG and the PCO responsibilities are assigned to the same group.

2.76 The other control groups (ECO and WCO) retain their identity after order completion and are responsible for ongoing functions related to circuits/groups installed by the order.

2.77 The ICG is responsible for reporting completion and for notifying the WCO and ECO that completion has occurred. It is also responsible for passing WORD/CLRC annotated with corrections and test results to the PCO.

2.78 The WCO is responsible for servicing the customer or trunk group which the order affects.

2.79 The ECO is responsible for maintaining and updating the circuit/group records and for managing the equipment and facility inventory associated with the circuit. It is also responsible for the reissue of a corrected WORD/CLRC, if necessary, to all affected work groups.

2.80 The PCO is responsible for routine test and service maintenance on the circuit/group which the order created or changed.

CONTROL

2.81 The conceptual structure described previously is critical to the effective control of the ADS process. The most important concept contributing to the control of the process is the specification of control groups and RWGs for each function. Responsibility for the order flows from control group to control group for the various functions. For each function, the control group has the assistance of the RWGs to perform the function. Overall responsibility for monitoring the complete process resides with the WCO. The interactions among the control groups and RWGs are scheduled using critical dates.

A. Critical Dates

2.82 At specific points in the order process, ADS has defined critical dates which are defined as the completion of specific functions by control groups or RWGs. The majority of these critical date definitions are serial in that each succeeding one assumes the completion of functions associated with a previous critical date.

2.83 Fundamental to the ADS control concept is the principle that the time it will take an order to pass from one state (critical date) to the next is predictable. The estimated time intervals between critical dates and critical date intervals are determined using established interval guide procedures.

2.84 In most cases, standard intervals based on the initial characteristics of the service and equipment ordered can be used to determine the critical dates. The standard intervals may be either Bell System standard or local standards, depending on the class of order. In cases where standard intervals are not applicable, the critical dates are determined on an individual case basis agreed to by all parties involved.

2.85 Standard Bell System intervals do not exist for message trunks. It is expected that one normal interval will satisfy the needs of a majority of message trunk orders (planned) and that one additional interval will handle emergency (demand) orders.

2.86 Although there is a great deal of flexibility in establishing a scheduled work completion date (SWC) for planned message trunk orders; once the date is established, there is benefit to issuing the order with a reasonable minimum interval and completing the order on time. This reduces the number of orders which will be issued while others are outstanding, reduces lost orders, misuse of inventory on outstanding orders, and the total number of outstanding orders. The result is reduced tracking effort and less error resolution.

2.87 The specification of critical dates is of central importance to the effective control of the ADS process. The total interval between the application date (APP) and DD (SWC if present) must be divided among the control groups for authorization/order preparation, design, and implementation. The scheduled issue date (SID) and designed, verified, and assigned date (DVA) [in conjunction with the records issue date (RID)] schedule the interactions between the control groups. Additional dates are needed to schedule the interactions between control groups and RWGs. These are local issue date (LID), engineering information report date (EIRD), confirming engineering information report date (CEIRD), assignment date (AD), and DVA. Finally, the requisition received date (RRD) and the material on job (MOJ) date specify the time constraints on the equipment

suppliers. The scheduled dates are defined in Part 1.

B. Sequential Flow of Responsibility

2.88 In this part, the details of the sequential passing of responsibility from function to function are discussed. Four sequential steps are defined as follows:

- Authorization/Order Preparation
- Design
- Implementation
- Completion/Record Update.

Each of the first three is under the responsibility of a control group.

2.89 The interface between authorization/order preparation and design is a set of order documents (a primary order and multiple local translated orders as required). The primary order is scheduled to be issued on SID and is sent to all design groups, to the LWGs (if applicable), and to other groups as appropriate. When required for specials, the local translated orders are sent to the LDGs and other groups as appropriate by the LWGs by LID which is SID plus one working day.

2.90 The output of the design step is a set of work documents and supply orders which is sent to all applicable implementation groups and supply groups, respectively. The supply orders are scheduled to be received by the supply groups on RRD which is nominally equal to AD. The work documents are scheduled to be issued by RID and must arrive by the records arrival date (RAD) which is DVA minus one working day. The ECO is responsible for the distribution of the work documents to all implementation groups.

2.91 The interface between implementation and completion/record update is the completion notification for the order which is scheduled for the scheduled report date (SRD) (DD/SWC plus one working day). The ICG passes completion information to the PCO, ECO, and WCO for use in record update.

2.92 Figure 7 illustrates the previous interactions and also shows the vertical reporting which is discussed in C, ***Vertical Reporting Interactions.***

2.93 Any problems at the three critical interfaces are handled by the two control groups at the interface. For example, if the implementation groups discover any problem with the assigned equipment or facilities, they contact a design group for assistance. Problems with meeting the scheduled dates must also be transmitted to the other functions affected.

C. Vertical Reporting Interactions

2.94 When there is more than one group responsible for a function, then the interactions between the control group and RWGs must be established. There are different types of interactions for each of the functions shown in Fig. 7.

2.95 When local translated orders must be issued in authorization/order preparation, a copy of the primary order must be sent to authorization groups associated with each of the circuit terminations to initiate the local order writing function. They must issue the local order documents by LID.

2.96 The ECO must initiate activity in each local design group. The LDGs and the ECO must interact based on the scheduled EIRD, CEIRD, and AD dates. If an LDG cannot meet their scheduled dates, they must notify the control group.

2.97 In the implementation step, the first vertical interaction occurs at the preinstallation (DVA) check. A positive report must be made by each implementation RWG to the ICG. By the plant test date (PTD), each implementation RWG must report a jeopardy to the control group if their portion of the work will not be completed on time.

2.98 On Figure 7, the supplier loop is shown with two objective dates. MOJ is scheduled to be DVA minus one day, and if it is not met, then the implementation RWG will subsequently note if DVA is missed and pass that information on to the control group. The RRD date is a scheduled date which the design RWGs must meet. If not, the design RWGs notify the ECO.

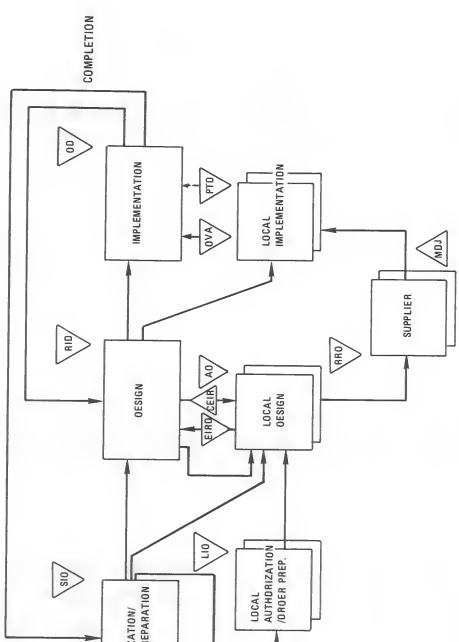


Fig. 7—Flow of Functional Responsibility

D. Functional Order Control Hierarchy

2.99 Figure 8 illustrates a functional order control hierarchy based on the previous discussion. The process is depicted in terms of who is responsible and for what they are responsible. In processing the order, the three portions—order writing, design, and implementation—are administered by three control groups. For design and implementation, the control groups have responsibility for all the items resulting from the order. For each item, local work is required by RWGs. Note that the control group may also have local responsibility and also be an RWG. The same RWG may have work on one or more items. Each of these groups with local responsibility cover one or more CWLs associated with the item.

2.100 In order writing for some special services, there are local orders written by order writing RWGs. These local orders are concerned with service and equipment requirements at one or more circuit terminations (CKLs).

3. PROCESS REQUIREMENTS

3.01 The ADS process is to be used for all orders requiring design (design in this context means circuit design or the production of circuit records by the CPB) and for other orders specifically identified as requiring ADS handling.

3.02 An order is an authorization to perform work given by the requestor. For the ADS process, orders may be of four types:

- Message trunk
- Carrier
- Special service
- Design.

ORDERS

A. Affecting Message Trunk Circuits and Groups

3.03 A message trunk is a circuit that is a common artery in the message network between or within switching systems, cord switchboards, etc, for use in the establishment of end-to-end communication paths. A trunk group is a set of communication paths, traffic engineered as a unit for the establishment of connections within or between switching systems in which all the paths are interchangeable except where subgrouped.

3.04 All orders affecting message trunks (including those for intra-building trunk groups) are ADS orders. These orders are written in the standard message trunk order (MTO) format.

3.05 The MTO contains the following information when initiated:

- Order number
- Order type
- Trunk group serial number (2-6 code)
- Related orders
- APP, DD, SWC (if used)
- Issue date (ID)
- Intermediate scheduled critical dates
- Common language trunk group ID (new)
- Common language trunk group ID (old)
- WCO
- Preparer
- ECO, ICG, PCO
- Nonstandard traffic measurement requirements (if any)
- Number of trunks currently in group
- Number of trunks desired in group
- Remarks.

3.06 An MTO affects only one trunk group. The MTO can contain only one type of action: change group name, add trunks, or disconnect trunks. The Trunk Administrator is the only one who can originate an MTO.

3.07 Design orders affecting message trunks or groups are handled following the same procedures as MTOs. The CPB and other design

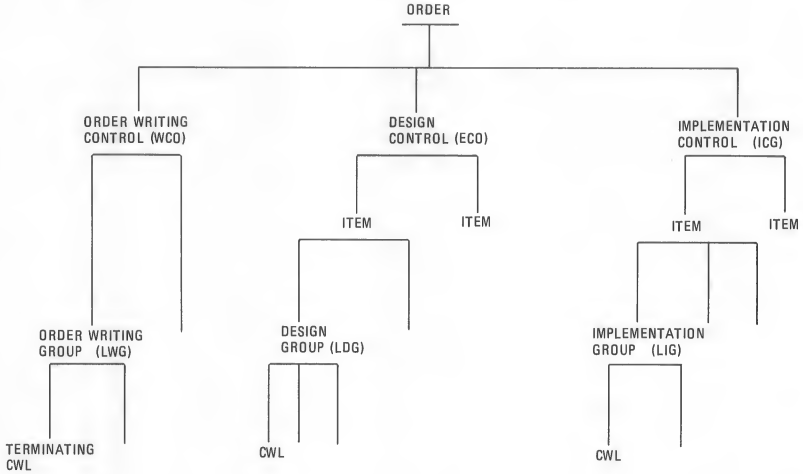


Fig. 8—Functional Order Control Hierarchy

groups can originate design orders containing message trunk items with action codes of R or RG. These items must affect the same trunk group.

3.08 The design order for message trunks must contain the following information:

- Order number
- Trunk group serial number
- Related orders
- Scheduled critical dates
- Issue date (ID)
- WCO/ECO (ECO is originator)
- Preparer
- ICG, PCO
- Common language circuit/group identification of circuits/group to be rearranged
- Remarks.

B. Affecting Special Service Circuits and Groups

3.09 There are four basic classes of orders handled using special service procedures. They are as follows:

(a) Those initiated by a customer requesting the start, change, or termination of a tariff offered service. These are written using the USO or ISC/USO format. The customer may be the company in the case of tariffed official circuits.

(b) Those which are company originated to add, change, or disconnect nontariffed company service circuits. These are written using the Design Services Order (DSO) format.

(c) Those initiated by Business Services as a result of traffic data analysis to add, disconnect, or change circuits on an existing centrex trunk group. These are written using the Business Services Traffic Order (BSTO) format.

(d) Those which are company originated to change or modify existing circuits but do not change service requirements. These are design orders.

3.10 There are two sets of special service procedures which are used depending upon the type of order. These are special services—ISC procedures and special services—ADS procedures.

3.11 All ISC orders are handled using special services—ISC procedures. All other ADS special services orders are handled using special services—ADS procedures.

USO and ISC/USO

3.12 Within ADS, all ISC/USOs and USOs that require design or design review as indicated by the CLCI or an ADSR FID must contain the following information:

- Primary order number
- Order type
- APP and DD
- Issue date (ID)
- Originators name or appropriate code
- Specification of service and equipment requirements
- Shortened version of the CLCI
- A control section (where necessary) containing:

Control offices (ECO and PCO)

Scheduled critical dates (SID required and other intermediate dates as applicable).

Design Services Orders

3.13 The design services orders must contain the following information:

- Order number
- Order type
- Related orders

- Scheduled critical dates
- Issue date (ID)
- WCO/ECO (ECO is originator)
- Preparer
- ICG, PCO
- Common language circuit identification of circuits to be added, disconnected, or changed
- Action code (A, D, or C) for each circuit
- Remarks.

Business Services Traffic Order

3.14 The BSTO contains the following information when initiated:

- Order number
- Order type
- Trunk group serial number (2-6 code)
- Related orders
- APP and DD
- Issue date (ID)
- Intermediate scheduled critical dates
- Common language special services group identification (new)
- Common language special services group identification (old)
- WCO
- Preparer
- ECO, ICG, PCO
- Nonstandard traffic measurement requirements (if any)
- Number of circuits currently in group
- Number of circuits desired in group
- Remarks.

Design Order

3.15 The design order for special services must contain the following information:

- Order number
- Order type
- Related orders
- Scheduled critical dates
- Issue date (ID)
- WCO/ECO (ECO is originator)
- Preparer
- ICG, PCO
- Common language circuit/group identification of circuits/group to be rearranged
- Remarks

WORK DOCUMENTS

3.16 Most orders must be examined by the design groups to determine the circuit or group activity requirements in terms of WORD/CLRC items (ie, the item action codes and the remainder of the common language group/circuit ID must be determined for the circuits or groups specified on the order). Design orders do not require this determination since they are already expressed in terms of items.

3.17 For each item for which a design is produced, a set of circuit details is prepared by the ECO in WORD or CLRC format and delivered to the implementation groups.

WORD

3.18 The WORD format is defined in Section 682-400-010. WORD is composed of three parts: work authorization (WA), circuit details (CD), and test details (TD).

3.19 When circuit groups are involved, the CDs are composed of five parts: CDs from term

and sig to term and sig, CDs for trunk and traffic assignments at each end (CDA and CDZ), and group details at each end (CDAG and CDZG).

3.20 The layout for a trunk should include the trunk relay equipment at each end and all other assignable machine equipment including the connections to traffic measurement devices.

CLRC

3.21 The CLRC format is defined in Section 682-000-010 and includes a subset of the WORD information defined previously. When the CLRC format is used, it is accompanied by additional work documents containing the remaining WORD information.

Other Work Documents

3.22 Additional information other than WORD/CLRC (eg, traffic routing information for a trunk group, station diagrams, etc) may be sent by the design group. The RID has not been met until all work documents have been transmitted to the implementation forces.

GENERAL ORDER PROCESSING CONSIDERATIONS

A. Treatment of ADSR USOs Subsequently Not Designed

3.23 All orders entering the ADS process flow completely through it except some ADSR special service orders which are reviewed by the CPB and found to require no design. For these orders, the CPB issues an abbreviated WORD/CLCR containing only a work authorization portion marked "no card required" (see Section 790-140-100). This document is required since the plant forces are expecting a companion WORD/CLRC for an ADSR USO.

B. Handling of Order Supplements

3.24 When an order is supplemented, the order document is reissued with the supplement suffix of the order number incremented. Distribution of the order supplement is to the work groups affected.

3.25 The processing of an order supplement is a function of the category of the supplement. The categories—Modify, Cancel, Reschedule, and Other—are defined in Part 2.

3.26 For Modify supplements, the design groups must redesign the changed items and reissue a supplemented WORD/CLRC for those items, if WORD/CLRC has been issued. The implementation groups use the supplemented portion of WORD/CLRC along with the unchanged portions to perform the required activity according to the new scheduled dates.

3.27 For Cancel supplements, if WORD/CLRC has been issued, the design groups must retrieve the preorder status of the canceled items and reissue a supplemented WORD/CLRC with the appropriate K-type action code reflecting the way the circuit/group should be left by the implementation groups. If WORD/CLRC has not been issued, the design groups restore pending assignment activity to its previous state and no WORD/CLRC is ever distributed for the canceled portions of the order. For Reschedule and Other supplements, the design group reissues the work authorization portion of the WORD/CLRC, if it has been issued. This provides the implementation forces with the updated scheduled dates and/or other administrative data for use in working the order.

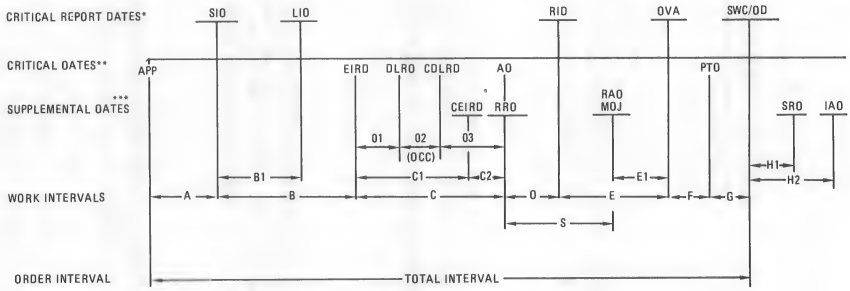
SCHEDULING CRITICAL DATES

3.28 To control the time allotted to each function in order to meet the DD, scheduled dates are established for each of the ADS critical dates.

3.29 Of the ADS critical dates, only eight are established, independently (APP, SID, EIRD, AD/RRD, RID, DVA, PTD, and DD/SWC). The remaining dates, LTD, CEIRD, RAD, MOJ, SRD, and IAD (inventory available date) can be calculated from the other dates. For ISC-OCC orders, the DLRD and CDLRD dates also must be independently specified.

3.30 For the critical dates, there are seven work intervals (nine for ISC-OCC orders) which must be determined in order to schedule the order. These intervals are determined using interval guide procedures and are either specified on an individual case basis or determined using an interval table and associated procedures.

3.31 Figure 9 illustrates the ADS critical dates and intervals.



* A CRITICAL DATE WHICH IS REPORTED TO THE CONTROL SYSTEM.
** A CRITICAL DATE WHICH IS NOT REPORTED TO THE CONTROL SYSTEM.
*** A NON REPORTING CRITICAL DATE WHICH IS COMPUTED FROM OTHER DATES.

Fig. 9—Critical Dates and Order Interval Chart

A. Interval Table Techniques

3.32 An interval table consists of standard (system or local) work intervals and overall intervals expressed in working days.

Service Item Method

3.33 For each service item, a standard total interval is specified from APP to DD including a set of work intervals between critical dates.

3.34 For an order, each of the service items determines an associated set of work intervals. Each work interval for the order is the maximum of the work intervals for the individual service items. The total interval for the order is the sum of the resulting work intervals.

3.35 Since the service item table method computes the total interval as well as establishes the intermediate dates, there is a possibility that a longer or shorter interval may be desired by the requestor. It is expected that few shorter intervals will be requested and/or granted. However, in unusual circumstances, a shorter interval can be established on an individual case basis with the agreement of all groups involved in the order.

3.36 For total intervals longer than calculated, the extra days are equally divided as much as possible among the work intervals. The number of extra days is divided by the number of work intervals (seven or nine) and the result is truncated to determine the number of additional days per interval. The remaining days because of truncation are allocated to the DVA-PTD interval.

Total Interval Method

3.37 For each possible total interval between a maximum and a minimum, a table entry exists to specify the work intervals which establish intermediate dates.

3.38 The total interval method requires the entry of APP and DD or the entry of APP and total working days. From these inputs, all scheduled dates are calculated using the table.

B. Interval Calculation Procedures

Message Trunk Interval Calculations

3.39 Only the total interval table method is used for message trunks. Two total interval tables exist; one for interarea orders and one for intra-area orders. The intra-area table is OTC supplied for each area. The interarea table is system standard.

3.40 Message trunk orders always have a firm DD. An SWC may be optionally specified. Normally, SWC is supplied for planned orders (ie, those forecasted for the next busy season). There is no constraint on establishing DD for message trunk orders, and DD can be earlier than APP.

3.41 Given APP and DD/SWC, three cases exist with different procedures:

(a) ***SWC/DD is before APP + minimum interval***—An SWC is established equal to APP plus minimum interval and the intermediate dates are established using the minimum interval entry in the total interval table. The initial entered SWC, if present, is replaced by the calculated SWC.

(b) ***APP + minimum interval is before SWC/DD is before APP + maximum interval***—The intermediate dates are established based upon the appropriate entry in the total interval table.

(c) ***SWC/DD is after APP + maximum interval***—Intermediate dates are established backwards from SWC/DD using the maximum interval in the total interval table.

Local Special Services Interval Calculations

3.42 For local specials, both the total interval method and the service item method may be used. One total interval table and one service item interval table exist per area. Both are OTC supplied.

3.43 The service item table method may be used as previously described to establish both the total interval and the intermediate scheduled dates.

3.44 The total interval table method may be used if APP and DD or APP and the total interval are known. DD for special services must be on or after APP.

3.45 The total interval table for local specials has a maximum table entry but must provide total intervals as small as zero working days. Total intervals longer than the maximum table entry are established by adjusting the maximum interval. Extra work days are equally divided among the work intervals with the remaining days due to rounding being allocated to the DVA-PTD interval.

ISC Interval Calculations

3.46 For ISC orders, only the service item method can be used. One service item interval table exists which is the system standard table specified in the ADS/ISC Interval Guide.

ISC-OCC Interval Calculations

3.47 For the subset of ISC orders which are OCC, the EIRD-AD interval is divided into two work intervals; one of which is specified by the OCC. Consequently, the establishment of scheduled dates requires an input from the OCC.

C. Details of Establishing Scheduled Dates

Disconnect Orders

3.48 For orders which have purely disconnecct action, interval table calculations are not used. Scheduled dates are established on an individual case basis. The only applicable independently established dates in addition to APP and DD are SID, RID, and DVA.

Orders With a Total Interval of Four Days or Less

3.49 For local designed special services, when the interval between APP and DD is less than or equal to four working days, special interval guide procedures apply. This type of order is expected infrequently.

3.50 On all ADS designed orders, including those with an interval of four days or less; the intermediate SID, RID, and DVA scheduled dates exist.

3.51 When the interval is less than four working days, at least two of the five dates (APP, SID, RID, DVA, DD) must fall on the same calendar day. The following table shows the recommended technique for establishing the intermediate dates.

Total Interval	APP-SID	SID-RID	RID-DVA	DVA-DD
4	1	1	1	1
3	0	1	1	1
2	0	0	1	1
1	0	0	0	1
0	0	0	0	0

3.52 For all orders, the same technique of collapsing dates is used for reestablishing critical dates as a result of a supplement.

Estimated Due Dates

3.53 Those special service orders marked with estimated DDs [eg, date to follow (DTF) orders] are worked using interim dates until the DD is firmed up. Interim scheduled dates are established based upon normal interval guide procedures. The procedure for adjusting dates when a firm date is determined is discussed in the section on supplements. The firm DD must be specified no later than the interim DVA date.

Undated Orders

3.54 Orders for special services which are not ISC may be issued without a calendar DD. These orders will carry only one of four letters (W, X, Y, or Z) in the DD field. A calendar APP date is always used. The establishment of scheduled dates for the remaining critical dates is optional.

D. Recalculation of Scheduled Dates for Order Supplements

3.55 After scheduled critical dates are established, they can only be changed by an order supplement.

3.56 For supplements in the Modify and Cancel categories, all critical dates must be rescheduled to control the functions which must be redone.

3.57 For Reschedule supplements, only critical dates which have not been finished can be changed.

3.58 The reestablishment of scheduled dates for an order supplement is done on an individual case basis.

3.59 For all orders, when scheduled dates are reestablished over a remaining interval which is very short, the rules defined above should be used for collapsing dates where necessary. For original date establishment, these rules are only used for specifying dates on local special service orders with a total interval of less than four days.

DETAIL REQUIREMENTS

A. Definition of the Flow of Responsibility

3.60 The ADS process is specified by a sequential flow of functions as presented in Fig. 5. Each function is under the responsibility of a control group and one or more RWGs.

3.61 The discussion which follows defines the responsibilities of functional groups, ie, specifies the requirements for the RWGs and control groups for each level of a function. The requirements for a control group at the item and order level and the requirements for each RWG at the local level are defined.

3.62 Usually a control group also has local level responsibilities. In that case, the description of its responsibilities is a combination of the control responsibilities and the responsibilities for an RWG. In addition, transmittal of information and other interactions between the control group and an RWG imply an internal interaction between the control group and itself.

3.63 Figure 7 graphically shows the flow of responsibilities from group to group. The arrows between functional groups usually imply the passing of information as well as the passing of responsibility. The blocks in Fig. 7 are a representation of functional groups and not of organizations. Consequently, a control group which also has local level duties (ie, is also an RWG), as well as control duties is represented by two blocks.

3.64 Figure 7 shows all the objective dates superimposed on the flow of responsibility for the functional groups. When there is only one group for either order preparation or design, there is a simplification of the process and scheduled dates. The remaining functions are not significantly simplifed. For order issuance, local orders are created; one of which must be considered as the primary order. The SID and LID function becomes one function which is controlled by SID only. For design, EIRD and CEIR are not used when there is only one design group. However, AD and RID are both still required.

B. Authorization/Order Preparation

Issuance of the Primary Order

3.65 The ADS process starts with the authorization function. Either through negotiation with the customer, trunk servicing, or the plant extension process, the need for an order is determined. Once an order exists, a formal order document is written. This initial order document is called the ***primary order.*** The primary order must be distributed to the ECO and ICG.

3.66 For special services, an authorization group for each circuit termination must be included on the distribution list. For ISC special service orders, the distribution to the local authorization groups is addressed to the ISC team covering the termination (which then forwards it to the appropriate authorization groups).

3.67 The completion of this function marks the actual date (ID) associated with SID. The issue date must be noted on the order document.

Local Order Issuance for Special Services

3.68 Each of the local authorization groups should initiate local orders such as a translation of the primary order into local terms and/or a related order for terminations. If no modifications are deemed to be required, the primary order can be considered to be the local translated document and be distributed as such. The local translated orders should be completed in conjunction with the primary order.

3.69 The local translated orders are distributed to the LDG. The distribution of the translated order by a local authorization/order preparation group marks the actual date associated with LID. The issue date for the document must be noted

on it. In addition, the local translated order must have the primary order number on it.

3.70 Figure 10 illustrates the general authorization and order preparation function which was previously described. In some cases, the generation of local orders may be initiated on an informal basis via telephone conversation instead of via the primary order distribution.

Authorization/Order Preparation for ISC Orders

3.71 The ISC plan is designed to coordinate special service orders crossing company and OTC operating area boundaries and other orders requiring special attention (eg, data). To achieve this objective, ISC teams are formed. Each ISC team covers an ISC area which is usually an OTC operating area. Within the ADS process, this team performs three major functions: overall coordination (administrative control), error resolution, and communication. In the nominal ADS flow, the ISC team activities are exhibited primarily in the authorization and completion function.

3.72 Figure 11 illustrates the special service authorization process including the participation of the ISC team for ISC orders. The ISC order is the primary order when ISC is involved. Note that functionally, this flow fits into the specification of Fig. 9 with the interarea coordination portion of the authorization function being done by the ISC teams.

3.73 Using the primary order, each local ISC area must initiate a local translated order. This is required so that the order document can be interpreted by the local Customer Records Information System (CRIS). If termination requirements dictate, additional related orders may be written.

C. Design and Design Distribution

General Design Process

3.74 The basic design technique is a detailed layout of the circuit in four steps:

- Routing
- Facility assignment
- Circuit design
- Equipment assignment.

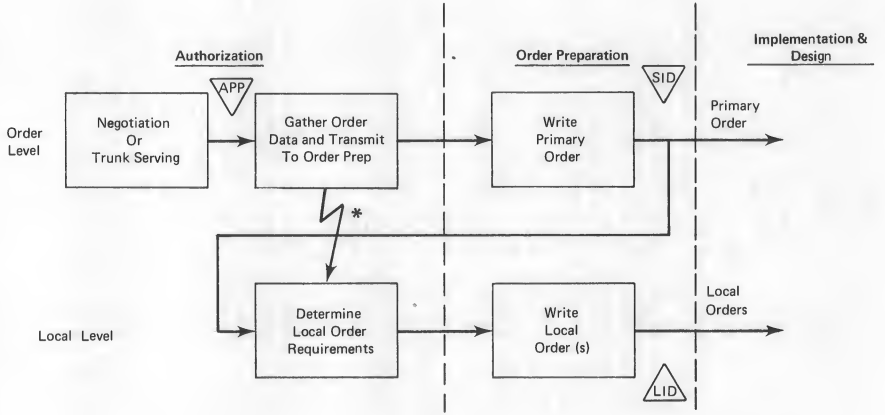
Using the circuit terminations, routing is done to produce a list of all CWLs through which the circuit passes. Facility assignment then selects available facilities of a specified type from the inventory between the CWLs. The circuit design step determines functionally what equipment (including plug-ins) is needed and at which offices via an analysis of the electrical transmission characteristics of the facilities and of signaling requirements. Finally, the specified equipment is chosen from available inventory at the CWLs, however plug-ins are provided from a stock location.

3.75 Of the four steps above, two (facility assignment and equipment assignment) are local level activities. Circuit design and circuit deployment are circuit level activities. For each order processed, there is a circuit deployment plan (high level routing). The plan includes planned routing and has provided the necessary facilities and equipment to satisfy the plan. Unit assignment of equipment and facilities is made by the design group(s).

3.76 Figure 12 graphically shows the circuit layout design technique and, in addition, shows the interface design technique which is used for interarea circuits. Note that circuit layout design requires two separate interactions between the item and local level; one for facility assignment and again for equipment assignment. The interface design technique requires only one interaction. When only one design group is involved, interface design is not applicable.

3.77 For interface design, a high level circuit design activity is done at the same time as high level routing (deployment plan). The design group facility interchange points are thus determined and each design group then prepares a tentative facility and equipment report (EIR) which is forwarded to the design control group. Detailed circuit design is done by the design control group and returned to each design RWG. The design RWGs then update their inventory records to meet the AD requirement.

3.78 The output of the design function is WORD (or CLRC plus authorizing document) containing a work authorization, circuit details, and transmission



* Initiated via telephone conversation as required

Fig. 10—Authorization and Order Preparation Function

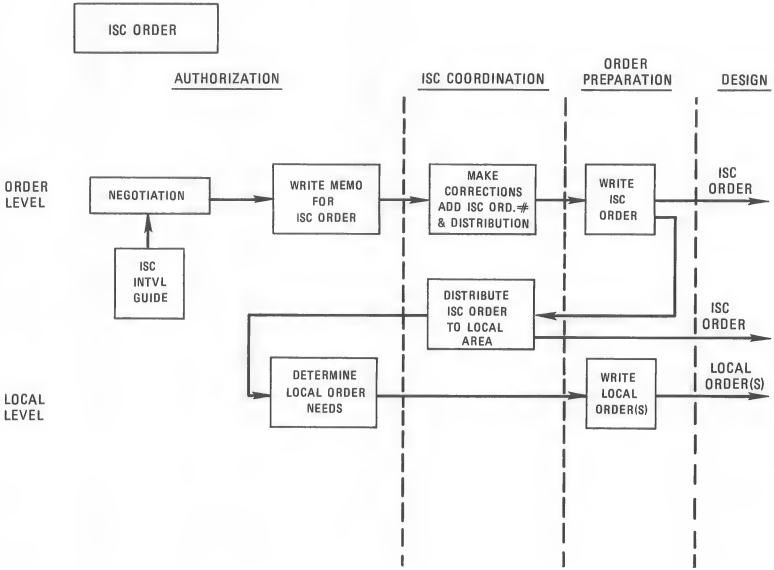


Fig. 11—Authorization and Order Preparation Special Services—ISC

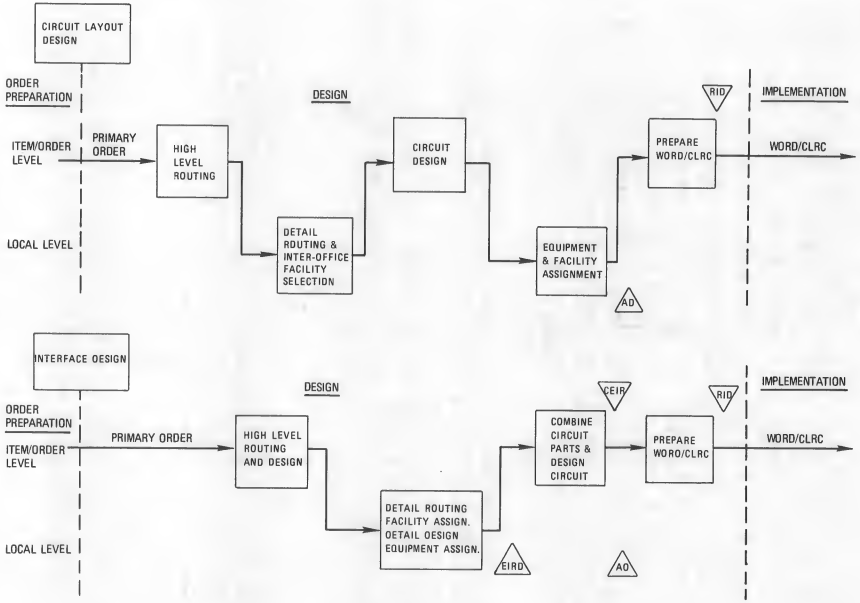


Fig. 12—Design Function (ADD)

information to be used to implement and maintain the circuit. This document must be prepared by the design control group and delivered to the ICG and RWGs as the final step in the design function. If they are identified to the design group, distribution is also made to OWGs for implementation.

3.79 In addition to distribution of the WORD/CLRC to the implementation function, the design control group is responsible for distribution of the document to each design RWG which then must validate the portion of the WORD/CLRC relative to them.

3.80 The preceding discussion of the design function is for a circuit addition. For a disconnect, the function is much simpler, requiring only an inventory status posting plus the preparation and distribution of the WORD/CLRC. This flow is presented in Fig. 13.

Design Control and RWG Responsibility

3.81 The design function begins when the design control group receives a copy of the primary order. Any related local orders must also be input into the design function. A request for facilities and equipment is prepared for each intermediate design group and forwarded to them.

3.82 By AD, each design group must have completed all of its duties including making all the necessary assignments of equipment, facilities, and the transmittal of requisitions for equipment to suppliers. Suppliers must receive requisitions by RRD which is normally equal to AD.

3.83 When each design RWG has met its AD requirement and returned all necessary assignment information, the design control group must prepare and distribute the WORD/CLRC. The standard for mechanized systems is WORD. For manual operations, the form of the document is a local version of the CLRC. Entering the WORD/CLRC into the distribution system marks the actual date associated with RID.

3.84 The design control group is responsible for the delivery of the WORD/CLRC to all implementation groups.

3.85 For cases where the primary order covers more than one area (ie, more than one CPB), the local design function begins with the receipt of the primary and/or local translated order. If an intermediate (nontermination) design RWG is involved in assigning facilities and/or equipment, the ECO is responsible for notifying them of their EIR requirement. The local design groups then prepare an EIR and forward it to the ECO by EIRD. The ECO in turn acknowledges receipt and compatability of the selected equipment and facilities by returning a CEIR.

Loop Assignment and Station Engineering

3.86 The assignment of loops and switching line equipment is a POTS-like (plain old telephone service) activity which is required, in general, for special services. Loop assignment is a function necessary only for design RWGs responsible for a circuit termination, although for some terminations there may be no assignment required.

3.87 Most special services have station equipment associated with them. Complex station equipment requires that a station engineering function be performed producing station details to be used during installation.

3.88 Each design RWG is responsible for ensuring that loop assignment is made and station engineering is done, if necessary. This work is usually done at other locations by work groups under the direction of the design group using the information on the local service order documents. The loop and station assignments must be verified for transmission adequacy by the design RWG. Specification of the detail interrelationship between the OWGs and an RWG for design is outside the scope of ADS. However, the loop and station information (including loop makeup) is required by the design RWG prior to the local level design activity. Fig. 14 shows how loop assignment and station engineering fit ***functionally*** into the ADS process.

3.89 The design control group is responsible for ensuring that the station arrangements for all circuit terminations are compatible. In certain cases a Station Engineering Control Office (SECO) is designated to coordinate the compatibility of the terminations prior to finalizing of the design by the ECO. SECO is used only on ISC orders with exactly two CKLs.

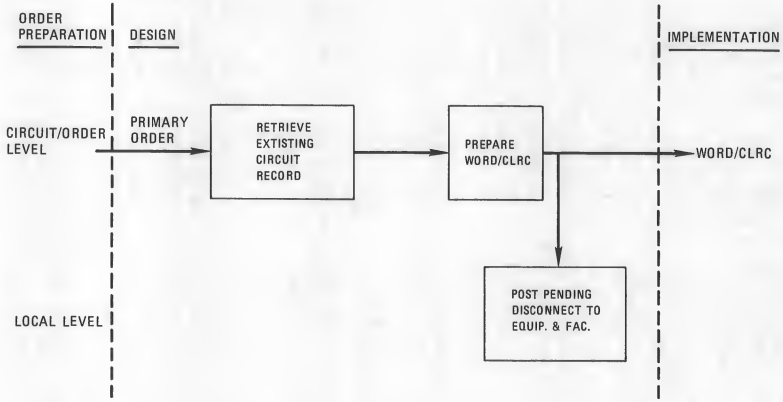


Fig. 13—Design Function (Disconnect)

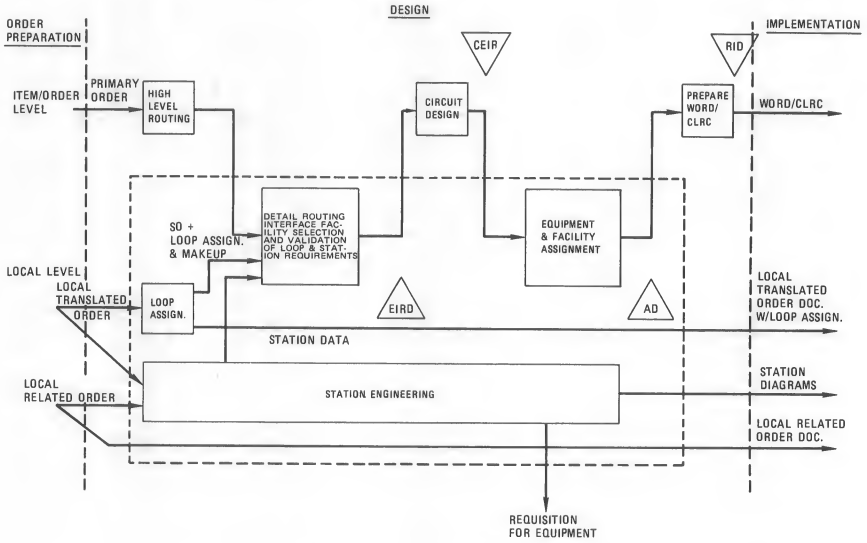


Fig. 14—Design Function—Special Services

Machine Assignment for Trunks

3.90 Each trunk in a group must be assigned termination in the A and Z end switching machines. This implies the assignment of trunk relay equipment and traffic measurement equipment to the circuit or group. This equipment is assigned in the design function. Trunk assignment may be done by one or more groups separate from the design RWG; however, the RWG is responsible for obtaining the assignments as in the loop assignment case described previously.

D. Implementation

General Process

3.91 Implementation of the circuits as specified by the work documents (WORD/CLRC, USO, etc) is done by implementation groups at each CWL. Administratively, the implementation RWGs are responsible for work at one or more locations.

3.92 ICGs involved in the circuit gets a copy of the WORD/CLRC or get equivalent information for their portion of the circuit. For example, each RWG must receive at least the information associated with its CWLS, but the ICG must receive the complete circuit information.

3.93 Figure 15 illustrates the implementation function for a circuit addition. Implementation is divided into three steps:

- Preinstallation check
- Circuit work
- Test.

The preinstallation check is to verify the arrival of circuit documents, plug-ins, and other ordered equipment and includes an inventory check to ensure that the assigned plant items are as expected on the work document. Discrepancies in assignment must be resolved with the design function.

3.94 On the DVA date, each implementation RWG must make a preinstallation check of all its CWLs and report the results of the check to the ICG. The following items, if applicable, must be checked to satisfy DVA.

(a) All work documents received by locations requiring them. [An advance circuit order and layout information (ACOLI) is acceptable for DVA purposes instead of the WORD/CLRC.]

(b) Assignment of facilities and equipment verified for availability

(c) Station and central office equipment on hand or received from supplier

(d) Plug-in equipment on hand

(e) Customer training scheduled (status to be provided by Business Services), where applicable.

Supplier furnished equipment (including plug-ins) should be available on or before MOJ which is DVA minus one working day.

3.95 No later than PTD, each RWG performs the implementation work required including local test. A report of any work jeopardy situation must be made on or before PTD to the ICG.

3.96 On PTD, the ICG begins an end-to-end test of the circuit(s). The ICG is responsible for the performance of an end-to-end test on the circuit and reports completion. The ICG is the same for every item on an order. Completions for special services are made only on an order basis. For message trunks and carrier, completions may be reported on an item basis.

3.97 Figure 15 also shows the implementation process for a disconnect. The primary work function done is to disable the circuit. At this point the circuit is technically disconnected, but the remaining circuit connections must be removed so that the equipment and facilities may be reused. For disconnected equipment and facilities, work on circuit tear-down is done after DD and prior to IAD.

3.98 Completion is defined as the point in time when the ICG is satisfied that the necessary circuit changes have been made as specified in the WORD/CLRC and other work documents. For specials, this cannot be before DD. This implies that new circuits have been turned up for service, disconnected circuits have been removed from service, and design rearrangements have been accomplished.

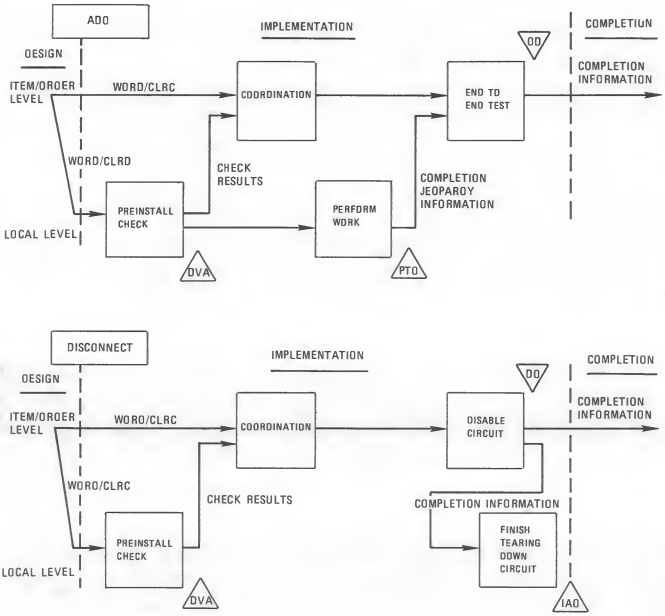


Fig. 15—General Implementation Function

3.99 The date on which the ICG deems that completion has occurred is called the completion date (CD). This date has two primary functions as follows:

(a) It is the in-effect date for billing (specials) and accounting purposes.

(b) It is the measurement date used for determining DD performance.

3.100 In addition, the reporting of completion is used to trigger two other events; the updating of inventory status, and the updating of other company records (circuit records, customer records, directory, intercept, etc) and their transmittal to functions responsible for on-going operations (eg, operations support systems).

3.101 The completion information passed to other groups by the ICG is the CD and ID of

the order (primary order number) or items (item number or circuit/group ID) completed. In conjunction with reporting completion of the order, the ICG must forward the corrected WORD/CLRC information plus test results to the PCO (in many cases, the same group).

Loop and Station Details

3.102 The existence of loop and station work also causes variations in the detail description of the implementation and completion/record update functions.

3.103 Details of the implementation function are shown in Fig. 16. In the figure, the local level is separated into three types:

- Intermediate offices
- Serving central offices
- Customer locations.

The flow is the same as in the general case, except for the existence of the customer premise work. The service orders are distributed to all terminal offices and to the installation forces doing the customer premise work.

3.104 The installation forces also receive station diagrams, if any, and materials and drawings previously ordered, if any. The customer premise work is done and is tested (including a test of the loopback to the terminal office). Service order completion information is passed to the completion/report update function.

Switching Routing Update for Trunks

3.105 When a new circuit is added to a trunk group, the switching machine must be informed (via translation table update or marker cross-connection) so that it can switch calls onto it. This information is sent as part of the work documents received by the RWGs responsible for the group terminations. The work is done in the implementation step at one or both of the terminating circuit points by updating the translation table for the machine.

E. Completion/Record Update

3.106 The ICG is responsible for insuring that completion information is sent to other groups as follows:

(a) CD is sent to the design control group.

(b) CD is sent to the originating group for the primary order, unless the originating group is the Business Office.

(c) DD jeopardies are sent to local order completion groups (specials).

(d) CD is sent to other groups as appropriate.

3.107 For ISC special service orders, the distribution to groups outside of the ISC area is addressed to the ISC team covering the group which must then forward the notification.

3.108 Within ADS, the local order completion activities are only required for special services. The local order completion groups receive USO completion information from the station installation forces.

3.109 Each of the work groups involved in the basic functions (authorization/order preparation, design, and implementation) has a record update function to perform. For example, each design group must update its facility and equipment inventory, and the design control group must update the circuit records.

3.110 For special services, the updates of inventory records for local loops and equipment is done on the post-completion USO pass.

3.111 The process above (for circuit addition) is diagrammed in Fig. 17. Also shown is the similar process for a disconnect. The primary change for the disconnect involves updating the equipment and facility inventory status. The equipment and facilities may be reused only upon the finishing of jumper and plug-in removal by each implementation group. Updating of inventory for reuse is automatically done at a fixed time after completion unless jeopardy information is received.

3.112 In Figure 18, the correlation of the USO completion information with the service (circuit) completion information is shown. USO

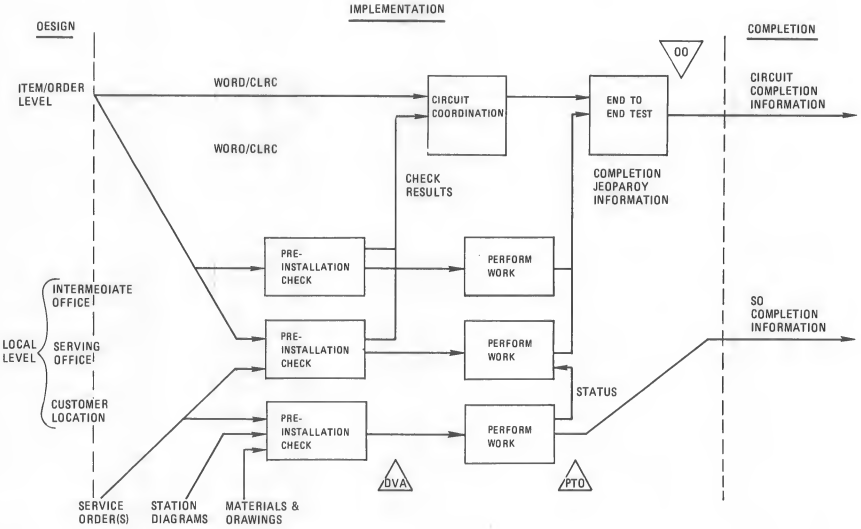


Fig. 16—Implementation Function—Special Services

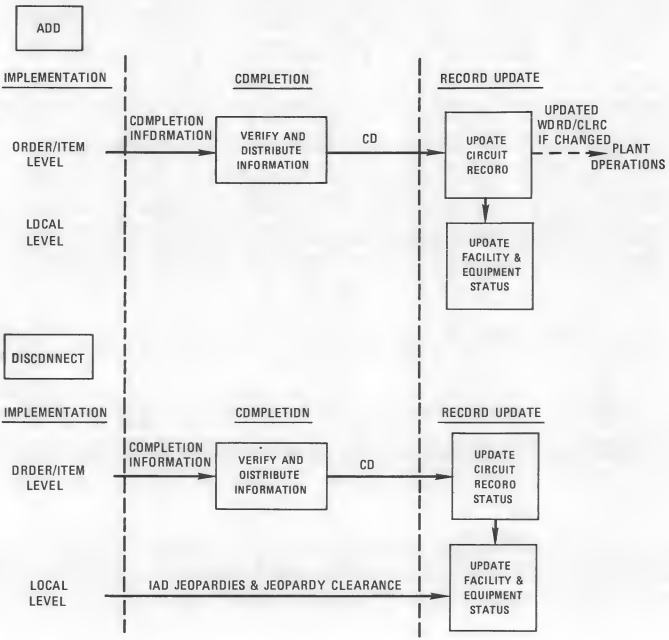


Fig. 17—General Completion/Record Update Function

completion and status update of the loop inventory is delayed if a service completion jeopardy is received. The completed USO is sent to billing and to the local authorizer.

4. CONTROL SYSTEM

DESCRIPTION

4.01 In this part, a control system is described which will aid in the control of the process. The description of the control system provides a basis for the control system requirements presented in Part 5.

4.02 It is important to differentiate between the control system and measurement plans. Measurement plans provide a quantification of performance for use by management and may be produced as a by-product of the control system or by independent means. This document does not address measurement plans except as they relate to the control system description. The purpose and use of measurements will not be described. For special services, measurement description is in the Customer Installation Service Results (CISR) and ISC plan.

4.03 A significant portion of the control of the process is embedded within the process itself. For example, the designation of control groups for the various functions and the implied reporting requirements between work groups help ensure that the process works. These and other intrinsic control aspects of the process are described in Parts 2 and 3. This division is concerned with the description of an external control system to support the process.

A. Objectives

4.04 The control system for ADS is a centralized system external to the process, which aids in controlling it. The ADS control system is defined as the Bell System standard for all ADS orders. Its use for ISC orders is mandatory. Its use for local specials, message trunk, and carrier orders is recommended. The use of the ADS Control System can effectively aid in meeting the basic ADS objectives presented in Part I.

4.05 The objectives of the control system are as follows:

(a) To provide a process by which order activities are scheduled, monitored, evaluated, and reported

(b) To provide each RWG and control group timely, accurate, and appropriate information on the status of order activity for which they are responsible

(c) To economically compile process measurement data and other performance statistics for management.

4.06 One of the key effects of a control system is to provide visibility to order status information. In particular, problems associated with completing an order on time are known early enough to allow corrective action to be taken. In addition, use of a control system facilitates the generation of performance statistics to identify weak points in the work flow.

B. Concepts

4.07 The basic concepts of the control system are as follows:

(a) Scheduled critical dates

(b) Status reporting (actual dates, jeopardies, and jeopardy clearance)

(c) Reminder scheme (functions due tomorrow and orders issued yesterday reports)

(d) Advance notification of problem (jeopardy report)

(e) Job performance aids (order status report, orders by function and date, etc)

(f) Problem analysis tool (jeopardy and functions missed history)

(g) Action initiation via interface to other systems (inventory status update, etc).

4.08 The interface of the control system with the process is shown in Fig. 19. Input into the system from all control groups and some RWGs are status updates in the form of actual dates,

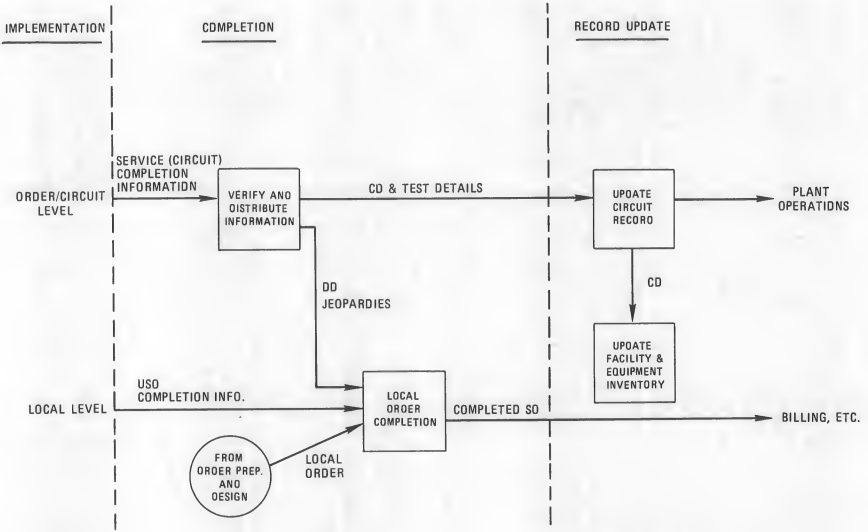


Fig. 18—Complete Dissemination and Record Update—Special Services

jeopardies, and jeopardy clearances. The system then produces daily reports (orders issued yesterday, functions due tomorrow, and jeopardy) for each RWG and control group and optionally for OWGs. In addition, the system produces performance reports on a scheduled basis for management. The system is also available for on-demand inquiries for information which it maintains.

4.09 The control system is a single source for order status on demand. However, the intergroup communications and reporting used within the process (in particular, the vertical interactions) remain basically unchanged by the presence of a control system.

C. Definition Principles

4.10 Basic principles to be used in defining the control system are as follows:

(1) Track the order as seen by the requester

(2) Provide for the interface with other systems for the dissemination of order/item completion—for example, inventory control, maintenance systems, etc.

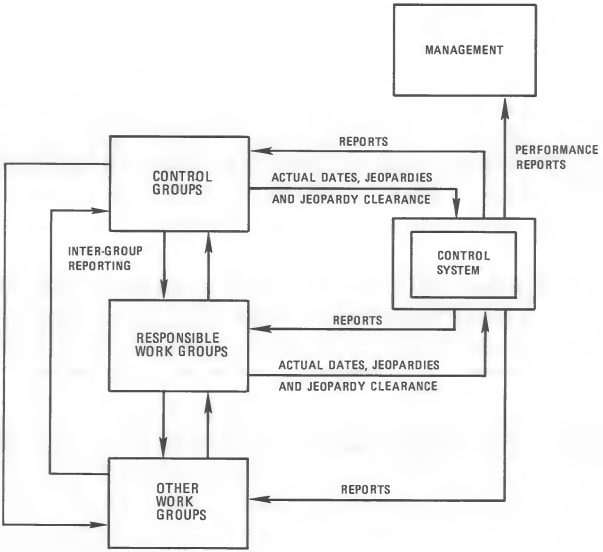


Fig. 19—An External View of the Control System

(3) Integrate specials, message, and carrier

(4) Track functions done as a unit by an administrative group

(5) Allow for flexibility in the definition of administrative group coverage.

4.11 The first two principles define what the control system is trying to control. The control system is tracking the primary order and is not tracking each local translated order separately. The issuance of local orders for ISC specials is tracked as part of the process by using the LID objective date.

4.12 Secondly, to provide an interface with inventory control systems, tracking may be done in all control systems involved in the order.

4.13 The third principle is a result of operational and development considerations. As nearly as possible, the control system should be the same for special services, message trunks, and carrier systems. Since the personnel interacting with the system frequently deal with all three classes of orders, they should find it easier to deal with one basic system rather than three. In addition, development of one system should be more economical.

4.14 The control system requires positive reporting of actual dates. Each group reports on its responsibilities for work functions required for its portion of an order, regardless of control or RWG assignment. All scheduled critical dates could be positively reported, but this would be unnecessarily expensive because of the large number of positive reports. Therefore, a minimum number of major administrative functions are selected for positive reporting.

4.15 The control system is structured in terms of who is reporting to it and not where. Within the control systems boundaries, this allows for varying numbers of RWGs and varying geographic coverage for each RWG at the option of the OTC.

OPERATIONAL PROCEDURES

A. Tracking Initiation

4.16 Initiation data required by the control system is in four categories: order level data, item level data, location level data, and ISC CKL data (required for ISC orders only).

4.17 Item and location level data are design concepts and are not generally known at order writing time. In particular, this information is not present on the ISC/USO, USO, BSTO, or MTO. Consequently, tracking initiation may be done in two or more steps.

4.18 For message trunk, design, and ISC special service orders, the order originator (WCO) is responsible for initiating track on the order by inputting the order level data only. Subsequently, the ECO is responsible for entering the item level data after determining it via analysis of the order, and each design RWG is responsible for entering its location level data after circuit routing.

4.19 For non-ISC special services, the WCO does not initiate tracking. Rather, the ECO is responsible for initiating track by entering the order level data as well as the item and location level data.

4.20 For design orders the ECO is also the WCO, and tracking initiation is done in one step.

4.21 For ISC orders, the WCO is responsible for entering the ISC CKL data as well as the order level data.

B. Positively Reported Dates

4.22 Using the definition principles, the specification of which actual dates should require positive reports can be done. Examining the detail flows in Part 3, a list of functions which could be positively tracked can be derived. These candidate functions, the group responsible, and the objective date for performing the function are in Table A. The supplier functions are not listed since they are tracked using AD and DVA.

4.23 The functions to be tracked have the three levels—order, item, and local—defined in Part 2. In addition to relating tracking to function levels, it can be related to physical quantities, in particular, to circuits/groups and CWLs.

4.24 The item function level relates directly to a circuit or group via the action code. Consequently, the item level of tracking is frequently referred to as the circuit level.

TABLE A

CRITICAL FUNCTIONS

FUNCTION	RESPONSIBLE GROUP	OBJECTIVE DATE
Write primary order	WCO	SID
Write local orders (specials only)	LWGs	LID
Request eg and fac from local design groups	ECO	after SID and before EIRD
Send EIR to ECO	LDGs	EIRD
Send CEIR to LDGs	ECO	CEIRD
Order or reserve equip and facilities	LDGs	AD
Issue WORD/CLRC for each item	ECO	RID
Issue local design documents	LDGs w/term	RID
Make preinstallation check	LIGs	DVA
Complete local work so end-to-end test can begin	LIGs	PTD
Complete end-to-end test, turn-up, and completion rpt	ICG	DD/SWC

4.25 Local level reporting relates to reporting on CWLs via the number of locations for which an RWG is responsible. One local level report by a group corresponds to multiple CWL reports — one for each location for which the group is responsible.

4.26 Table B summarizes the list of candidate functions for tracking purposes. Frequently the functions are referred to using the scheduled date name. The names of the actual dates corresponding to the scheduled dates are given. In most cases the actual date name is A+ scheduled name; however, ID and CD are exceptions.

4.27 In addition to tracking functions for which a control group or RWG is explicitly responsible, an aggregation of functions can be tracked. In particular, if no item (circuit) level work is required for a scheduled date, item level completion can be assumed to be completion of all local level functions. For example, DVA completion at the item (circuit) level can be interpreted as completion of all local DVA functions. Similarly, order level completion can be assumed to be the completion of all item (circuit) level functions for a scheduled date. These types of completion will be referred to as aggregate function completion.

4.28 The control system must have the ability to track at various levels of complexity. The ***minimum*** amount of tracking is the initiation of tracking and the posting of DD completion for the order [item (circuit) for message trunk and carrier].

4.29 The ***basic*** ADS tracking requires three intermediate positive reports to the control system. The positive reports are SID at the order level, RID at the item (circuit) level, DVA at the item (circuit) level, and DD/SWC at the order (item for message trunks and carrier) level. Note that DVA at the item (circuit) level is an aggregate function, whereas the remainder track actual functions. This was chosen since reporting DVA

TABLE B

CANDIDATE FUNCTIONS IN THE ADS PROCESS

SCHEDULED DATES	ACTUAL DATE NAME	FUNCTIONS		
		APPLICABLE LEVEL		
		ORDER	ITEM (CKT)	LOCAL/CWL
APP	-none-			
SID	ID	x		
LID	ALID			x (ISC)
EIRD	AEIRD			x
CEIRD	ACEIRD		x	
AD	AAD			x
RID	ARID		x	
DVA	ADVA			x
PTD	APTD			x
DD/SWC	CD	x (spl)	x(msg & CXR)	
IAD	-none-			x

at the local level would require a large number of user interactions with the control system. Implementation groups cover a relatively small geographic area compared to the other functions, and consequently have a larger number of RWGs involved.

4.30 Finally, ***ISC*** tracking requires the additional reporting of LID by each local order writing group, RID by each LDG having a CKL, and DVA and DD by each LIG having a CKL. These positive reports are used for measurement purposes to determine the ISC performance results.

4.31 Since the only local level reporting is associated with ISC CKLs (a subset of all CWLs), this level of reporting will be called the CKL level in the following discussions. This reporting, however, can be done individually for each CKL or may take the form of a single report by an RWG (a local level report) simultaneously reporting on all of its CKLs.

C. Responsibility for Posting Actual Dates

Posting SID and LID Completion

4.32 For non-ISC special services, ID is entered onto the order at issuance. The ID is subsequently posted into the control system by the ECO simultaneously with track initiation. This is the only actual date posting into the control system under the responsibility of a group other other than the one determining the date.

4.33 For ISC orders, ID is posted into the control system by the WCO at order tracking initiation. In local control ISC areas, the issue date associated with LID is posted into the control system by the LWGs.

4.34 For message trunk orders, ID is posted by the WCO independent of track initiation. The ID posting may be at the same time as track initiation for demand orders.

4.35 For design orders, ID is posted by the ECO/WCO simultaneously with tracking initation.

Posting of Other Dates

4.36 For all other actual dates, the group responsible for determining the date is responsible for posting it into the control system.

4.37 The control group or RWG responsible for determining a date may have an agent enter the information into the control system. This typically occurs when a centralized clerical group interfaces with the system. No special provision is made for identifying these agents to the control system. They must make the data entries by

identifying themselves to the system as the responsible control group or RWG.

D. Jeopardy Procedures

Responsibility for Jeopardy Determination

4.38 The group responsible for posting actual dates is responsibile for determining when a jeopardy situation exists and for posting all jeopardies and jeopardy clearances into the control system.

4.39 If an automatic jeopardy is posted, the responsible group must determine the appropriate manual jeopardy code and replace the automatic code.

Jeopardy Clearance Date Procedures

4.40 The jeopardy clearance date (JCD) is used where a long-term jeopardy situation exists. It inhibits the printing of the long term jeopardy on daily reports while maintaining jeopardy visibility on monthly reports. In addition, a function due reminder is produced on the JCD date.

4.41 For message trunk orders, any group which determines that a long term jeopardy situation exists must notify the WCO. The WCO is responsible for determining whether to supplement the order or to apply JCD processing by the control system.

4.42 If JCD processing is used, the clearing of a long term jeopardy situation must be reported to the WCO for JCD clearance. Prior to clearing JCD in the control system, the WCO will reschedule the remainder of the order process by specifying a new SWC. Normal order tracking is then resumed.

Multiple Control Sytem JCD Interactions

4.43 When multiple control systems are involved, JCD postings, changes, and clearances must be input into all control systems involved in the order.

4.44 Information about JCD action passes between control systems via the route used for order tracking initiation. The groups responsible for track initiation in non-WCO control systems are responsible for posting JCD information. The WCO is responsible for manually passing JCD information (posting, changes, and clearance) to the responsible groups for non-WCO systems.

E. Reports

4.45 The daily reports from the control system and their purpose are as follows:

(a) ***Orders Issued Yesterday (OIY)***—give each work group an advance notice of orders to be worked

(b) ***Orders Supplemented Yesterday (OSY)***—give each work group a notification of orders in progress which are supplemented

(c) ***Functions Due Tomorrow (FDT)***—provide each work group with a reminder of work that must be done

(d) ***Jeopardy (JEO)***—provide each RWG or control group a notification of problems associated with orders concerning them

(e) ***Orders/Items Completed Yesterday (OCY)***—provide summary information to be used in performing the record update function.

4.46 These reports should be sent to all work groups to which they would be useful. The design groups associated with the order should receive the OIY report. All work groups associated with the orders should receive the OSY report. FDTs should be sent to all work groups associated with the function due. JEO reports should be sent to RWGS and control groups responsible for clearing the jeopardy and to the authorization group for the order. The OCYs report should be sent to all design groups (for performing record update), the ICG and all authorization groups. For orders with any item actions other than add, the OCY report should be sent to all implementation groups.

4.47 The amount of information to be shown on the daily reports is a function of how the reports are to be used by the recipient. ADS specifies contents for standard daily reports. Additional versions of these reports may be optionally supplied. Which version to receive should be an option for each work group.

F. Inventory Movement Initiated by the Control System

4.48 Physical inventory status changes for equipment and facilities occur at three times in the life of an order: nominally at AD for assignment, at CD for working status, and nominally at IAD for reuse availability. At item completion, the service status of all inventory for the item changes (eg, spare to working or vice versa). In addition, the disconnected inventory is not made available for reuse until IAD. This allows the implementation forces at each CWL sufficient time for jumper removal on the disconnected facilities and equipment.

4.49 Inventory movement is classified as connect or disconnect for each equipment or facility component associated with an item on the order. Reused equipment or facilities on a change/rearrange are not affected by the order activity.

ADS Requirements

4.50 The control system operates in two modes—with no IAD reporting or with jeopardy reporting on IAD. The IAD option is invoked on an OTC operating area basis. When invoked, an FDT report is produced for IAD; and IAD jeopardy reporting at the location (CWL) level is allowed.

4.51 Connect (disconnect) inventory status may not be changed to reflect the new in-effect (spare) status prior to the reporting of CD for the item. For specials, CD only exists at the order level implying CD for all items on the order.

4.52 If there is no IAD reporting, disconnected inventory cannot be available for reuse until DD plus five working days (IAD) or until CD is reported (CRD), whichever is later.

4.53 If the IAD jeopardy reporting option is used, disconnected equipment (facility) inventory at a CWL (between two CWLs) cannot be made available for reuse until the earliest date after IAD on which there is no IAD jeopardy posted for the CWL (for the two CWLs). This requirement is less stringent than the one actually supported by the control system/inventory system interface described in the following paragraphs.

Control System/Inventory System Interface

4.54 The interface for the change in service status of connect and disconnect inventory is based on the reporting of completion for an item (CRD). The interface for disconnect inventory availability for reuse is on an item basis as well, rather than on a location basis. The result of this simplification is that the reuse availability of disconnected equipment inventory at some CWLs (facility inventory between some CWLs) will be delayed because of an IAD jeopardy at another CWL.

4.55 In some cases, a notification of reuse availability will be sent when there is no disconnect inventory managed by the inventory system. The inventory system must be able to handle this case.

Anticipated Usage of Inventory Movement Information by the Inventory System

4.56 For add item actions, the inventory movement is all connect and only the CD notification is required.

4.57 For disconnect action, all the inventory action is disconnect and two status changes occur—working to spare/nonreusable and spare/nonreusable to spare/reusable. It is anticipated that the inventory system will only change the inventory status once upon reuse notification. This simplification results in an incorrect working status between CRD and the reuse notification. The control system, however, will be required to send both notifications (CRD and reuse) for disconnect action.

4.58 For change/rearrange action, there is both connect and disconnect inventory movement. It is anticipated that the inventory system will only move inventory once (ie, it will wait until the notification of reuse availability). The result of this simplification is that the status of connect inventory also will be incorrect for the time period between CRD and the notification of reusability of disconnect inventory. The control system, however, will be required to send both notifications (CRD and reuse) for change/rearrange action.

MULTIPLE CONTROL SYSTEM ENVIRONMENT

A. Coverage

4.59 In specifying the external control system, the coverage of a single system must be considered, and consequently, the interactions between control systems to track an order must be defined.

4.60 As a ground-rule for control system coverage, each group should have to interact with only one control system. This implies that a control system boundary must be also a boundary for RWG coverage for all functions. In particular, the control system must cover an integral number of OTC operating areas, ISC areas, and message areas; in addition to departmental boundary considerations.

B. Division of Tracking Responsibility

4.61 With multiple control systems, each system is tracking the same order (primary order) and item (circuit). Consequently, among the systems there is only one set of order and item (circuit) level functions to be tracked. However, each system will independently track the local level functions within its coverage boundaries as appropriate.

4.62 Since there is only one set of order and item (circuit) dates, the control systems must jointly maintain order/item (circuit) status. Rules for ensuring the coordination of tracking must be established. At a minimum, order tracking initiation and order/item (circuit) completion must be coordinated — either by passing information from system to system or by assuming nominal completion and only passing jeopardy information. In addition, order/item (circuit) status reporting (actual dates, jeopardies, and jeopardy clearance) can be passed from system-to-system to redundantly maintain an accurate current status in each system. This redundant status tracking is viable only when machine-to-machine interfaces are available between systems.

4.63 The three control groups (order writing, design, and implementation) may be associated with different control systems. Consequently, order/item (circuit) status information may be spread among multiple systems. In addition, the notion of which control system is secondary depends upon the particular interaction involved — order writing, design, or implementation. For implementation (ie, DVA and DD completion posting), control systems not having the ICG within its coverage are secondary systems. For design, non-ECO systems are secondary systems. For tracking initiation and order writing, non-WCO systems are secondary.

C. Responsibility for Data Entry Into Secondary Control Systems

4.64 Depending upon the type of order/item (circuit) level data, its entry into secondary control systems is the responsibility of either an ISC team (only for tracking initiation in system with CKLs) or a design group. There may be, however, multiple ISC teams or design groups involved which are simultaneous candidates for entry of the data into the same control system. In that case, they are all responsible for entry of the order/item (circuit) level information into the control system. Each group attempts to enter the common information with actual entry being done by the first one trying.

D. Tracking Initiation in Secondary Systems

4.65 For tracking initiation, secondary control systems are those other than the system associated with the originator of the primary order (WCO). Secondary control systems are determined at two different times. First, at order writing, secondary systems covering circuit terminations are defined. Then, high level routing by design control group specifies additional secondary systems which serve intermediate CWLs but no terminations.

4.66 Figure 20 shows the intersystem coordination of order tracking initiation. The originating order writing group initiates tracking in its control system and writes the primary order. Copies of the primary order are sent to the groups responsible for initiating order tracking into secondary control systems covering circuit terminations. For special services, the local control ISC teams are responsible for secondary track initiation; and for message trunk and carrier, the design groups are responsible.

4.67 The design control group does high level routing which may determine additional CWLs. If so, additional control systems may be involved. The design control group then initiates tracking into its control system (if necessary). When additional control systems are involved, tracking is initiated by the design groups when

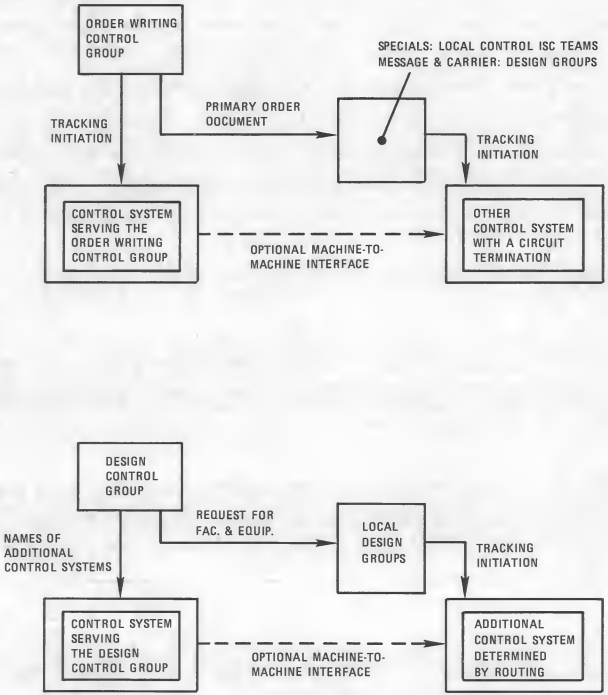

ORDER WRITING CONTROL GROUP
SPECIALS: LOCAL CONTROL ISC TEAMS
MESSAGE & CARRIER: DESIGN GROUPS
PRIMARY ORDER OCCUMENT
TRACKING INITIATION
TRACKING INITIATION
CONTROL SYSTEM SERVING THE ORDER WRITING CONTROL GROUP
OPTIONAL MACHINE-TO-MACHINE INTERFACE
OTHER CONTROL SYSTEM WITH A CIRCUIT TERMINATION
DESIGN CONTROL GROUP
REQUEST FOR FAC. & EQUIP.
NAMES OF ADDITIONAL CONTROL SYSTEMS
LOCAL DESIGN GROUPS
TRACKING INITIATION
CONTROL SYSTEM SERVING THE DESIGN CONTROL GROUP
OPTIONAL MACHINE-TO-MACHINE INTERFACE
ADDITIONAL CONTROL SYSTEM DETERMINED BY ROUTING

Fig. 20—Intersystem Interactions for Order Tracking Initiation

the request for facility and/or equipment is received from the design control group.

4.68 Tracking initiation in secondary systems may be done by an optional machine-to-machine interface between control systems. This only eliminates the secondary tracking initiation requirement and not the requirement for the information distribution to the ISC teams and design groups.

E. Coordination of Order Supplements

4.69 Order supplements must be coordinated following the same procedures as those for coordinating order tracking initiation.

4.70 Propagation of supplement information occurs in two steps analogous to tracking initiation. The WCO enters supplement data into its control system. The local control ISC teams (specials) or design groups (message and carrier) enter supplement data into secondary control systems covering circuit terminations. Then the ECO must forward the supplement information to the design groups for intermediate systems who enter it.

F. Order/Item Completion in Secondary Systems

4.71 For DD completion, secondary control systems are those other than the system associated with the ICG. DD completion in non-ICG systems is done automatically on DD plus two working days if there has been no DD jeopardy or completion posted. Upon automatic completion, CD is set equal to DD.

4.72 The ICG is responsible for positive reporting of completion data into its control system. In addition, this data must be passed to the ECO and WCO when they are not served by the control system serving the ICG. If these groups are associated with a different control system than the ICG, they may positively report DD completion into their systems. However, if not reported, automatic completion on DD + 2 will occur as noted previously.

4.73 DD jeopardies and jeopardy clearances must be passed to secondary control systems. Fig. 21 shows the intersystem coordination of DD jeopardies and jeopardy clearance. When a DD jeopardy or jeopardy clearance is posted by the ICG, the information is also passed to the design control group. The remaining design groups are then notified by the design control group, and they post the information into their control system.

4.74 DD status update in secondary control systems may be optionally done by a machine-to-machine interfaces on a positive basis. This includes the passing of completions, jeopardies, and jeopardy clearance. If a secondary control system has a mechanized link to a control system associated with either the ICG or the design control group, the control system does not automatically post DD completion.

G. Coordination of Other Order/Item Status Postings

4.75 The practicality of passing other order and item (circuit) level status information from system to system depends on the presence of a mechanized data link between machines. In the manual environment, the amount of data passed and its lack of timeliness once posted into the system make status update impractical. However, with a machine-to-machine interface, the practicality of status update depends only on the relative value of the data availability in all systems versus the development and operational cost of the interface.

4.76 Normally, RWGs served by a control system which is secondary for a given function will obtain order/item (circuit) status information directly from the appropriate control group.

PERFORMANCE MEASUREMENTS AND OBTAINING THEM

4.77 The basic definition of the control system should be made independent of measurement plan details. However, the measurement plan requirements must be considered in the detail specification of control system requirements.

4.78 The various performance measurement reports associated with the ADS process are required regardless of the existence of a mechanized control system. In the absense of a control system, the measurement statistics must be gathered either manually or by some other system. The control system could be defined without provision for producing the required measurement reports for the ADS process; however, from an economic viewpoint, the control system is required to produce all applicable measurement reports.

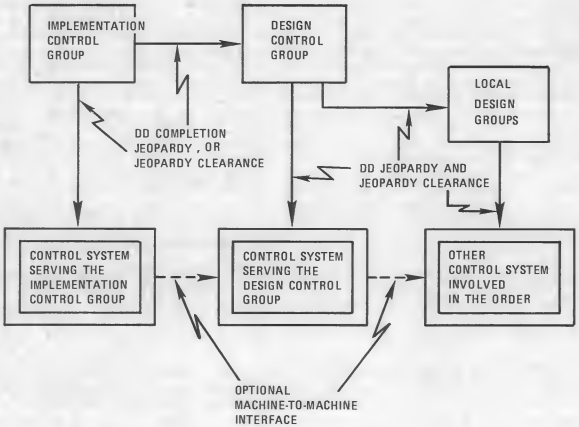

IMPLEMENTATION CONTROL GROUP
DESIGN CONTROL GROUP
LOCAL DESIGN GROUPS
DD COMPLETION JEOPARDY, OR JEOPARDY CLEARANCE
DD JEOPARDY AND JEOPARDY CLEARANCE
CONTROL SYSTEM SERVING THE IMPLEMENTATION CONTROL GROUP
CONTROL SYSTEM SERVING THE DESIGN CONTROL GROUP
OTHER CONTROL SYSTEM INVOLVED IN THE ORDER
OPTIONAL MACHINE-TO-MACHINE INTERFACE

Fig. 21—Intersystem Interaction for DD Completion

4.79 Usually, the control system can produce the measurement reports without additional input of data. In some cases, additional entries into the control system must be made because of measurement requirements.

5. CONTROL SYSTEM REQUIREMENTS

GENERAL

5.01 The ADS Control System is the AT&T standard control system for use with ADS orders. Its use by an OTC is recommended; however, a subset of these requirements [the Order Status Control and Tracking (OSCAR) System requirements as defined in the ISC practices] are required for ISC orders.

5.02 The ADS Control System is tracking an order as seen by the originators based on the primary order number.

5.03 The ADS control structure specifies control of the total process. The control structure can be broken in two parts: a ***control system*** and a set of control requirements on functional operations. As an example of control which is not part of the control system, an RWG may be required to report completions or jeopardy situations to the control group for its function but not to positively report to the control system. This division emphasizes control system requirements. Controls intrinsic to the process are specified in Part 3.

5.04 The control system exists as discrete entities covering finite boundaries, and consequently,

requirements are given on intercontrol system interactions.

A. Classification of Orders

5.05 The orders being tracked by the control system must be categorized into one of the following categories:

- Special ISC nondesigned orders (no WORD/CLRC produced)
- Special ISC/OCC nondesigned orders (no WORD/CLRC produced)
- Designed ISC orders
- Designed ISC/OCC orders
- Non-ISC special services
- Message orders
- Carrier orders
- Design orders.

The treatment of an order by the system depends upon its category.

B. Scheduled Dates Used

5.06 The control system utilizes a subset of the scheduled dates which are established for the ADS process (see requirements in Part 3). The critical dates used by the control system are as follows: APP, SID, LID, EIRD, DLRD, CDLRD, AD, RID, DVA, PTD, SWC, DD, and IAD.

5.07 All calendar dates used by the control system must be working days. Each OTC must provide a table of working days to the control system. Scheduled dates entered into the system which are not on working days will be converted by the control system into the next working day after the entered date.

Independently Specified Dates

5.08 For all orders, the establishment of APP, SID, and DD is required upon initial entry of tracking initiation data. An SWC may be optionally established for message and design orders only. SID must be on or after APP. When no SWC is input, DD must be on or after SID. When SWC is used, it functions as DD in the establishment of intermediate dates and for reporting purposes. In that case, DD must also exist but may have any chronological relationship with the remaining dates (eg, DD may be before APP). The shorthand notation SWC/DD is used to mean SWC if present, otherwise DD.

5.09 RID and DVA must be established at track initiation on all orders except the special ISC nondesigned orders.

5.10 EIRD, AD, and PTD may be optionally established for any order except the special ISC nondesigned orders.

5.11 For the ISC/OCC orders, the DLRD and CDLRD dates are required.

5.12 The control system may optionally provide the facility to compute the scheduled dates using the interval guide techniques specified in Part 3. The control system must provide the ability to manually enter scheduled dates.

Scheduled Dates Computed From Other Dates

5.13 LID is allowed only for ISC orders. It shall be automatically computed by the control system to be SID plus one working day.

5.14 IAD is used for inventory control purposes and only when an order involves the disconnecting of equipment and/or facilities. For any order except the special ISC nondesigned orders which has any item action other than add, the control system shall automatically supply an IAD scheduled date equal to CRD plus five working days.

Due Date Firming (DDF)

5.15 For ISC special services only, a firm DD may not be known (eg, date to follow—DTF and advance order—AVO). For these orders a DDF function exists. They are tracked with interim dates based upon the standard interval until the DD is firm. The control system must provide the capability to indicate that a DDF exists for designed ISC orders. The procedure for adjusting dates when a firm date is determined is described in the following paragraphs. The firm DD must be

determined by the interim DVA date. If not, the remaining dates are considered firm.

Undated Orders

5.16 Non-ISC special service orders may be logged into the control system with a DD of W, X, Y, or Z and no calendar date. A calendar APP date must be entered. Entry of calendar dates for the remaining control system dates (SID, AD, RID, DVA, and PTD) is optional. Noncalendar dates may not be entered for dates other than DD. The ID associated with SID must be entered when the order is logged.

5.17 The DDF modifier may be set in the control system for undated orders. No DDF functions due report will be generated unless a calendar date is also supplied for DVA.

5.18 No FDT report will be produced for any scheduled date for which a calendar date does not exist. No automatic jeopardies will be produced for scheduled positive report dates for which no calendar date exists.

5.19 Manual jeopardies may be posted against SID at the order level and against RID and DVA at the item (circuit) level even though no calendar date was supplied for them.

5.20 A posting of an actual date can be made for SID, RID, or DVA at the order/item level even though no calendar scheduled date exists. For statistical purposes, a function is considered to be met when an actual date is posted and there is no calendar scheduled date for comparison.

5.21 CD can be posted for an undated order. The CD date for the order propagates backwards to RID and DVA for all items on the order unless an actual date was previously posted for them.

5.22 Similarly, posting of an actual date for DVA at the item level propagates backwards to RID at the item level.

5.23 A special report listing undated orders by WCO shall be available on request.

C. Specification of Work Functions

5.24 Associated with each scheduled date are ***functions*** on one or more of the control levels — order, item (circuit), and CWL (CKL). Each function has a corresponding actual date noting its completion.

5.25 Table B shows all the functions and corresponding actual dates in the ADS control structure. A subset of these dates in the previous paragraphs require positive reports to be made to the control system.

D. Reporting Responsibility

5.26 Each actual date in Table B defines a ***function*** for which an RWG or control group is responsible. The control groups are responsible for order and item (circuit) level functions. RWGs are responsible for local level functions.

5.27 The determination of RWGs responsible for functions associated with the scheduled dates depends on the function and on the particular circuit (or group) involved. To the control system, three types of RWGs are defined corresponding to the basic functions shown in Fig. 7. The three types of RWGs are order writing, design, and implementation.

5.28 Table C illustrates the specification of RWGs responsible for local level work on a circuit. The design and implementation functions are done relative to each CWL (intermediate office and circuit termination). For ISC orders, a local order writing function is done relative to each terminating CWL (CKL). The number of RWGs for each function can be determined by the number of ***distinct entries in each column of the table. For each function, the number of RWGs may be from one to the maximum number of CWLs.***

5.29 For each function, one control group is specified for the order. These control groups are given the abbreviations WCO, ECO, and ICG for order writing, design, and implementation, respectively. They may be one of the RWGs as determined previously, or they may be an additional group.

5.30 The control system must know the identity of all RWGs for each of the three basic

TABLE C

DETERMINING RWGS FROM CWLS

CIRCUIT WORK LOC (CWL)	TERMINATION INDICATOR *(See Note)	ORDER WRITING	RWG DESIGN	IMPLEM
Cust Loc 1	M	x	x	x
Loc A	—		x	x
Loc B	—		x	x
•	•		•	•
•	•		•	•
•	•		•	•
Loc Y	—		x	x
Loc Z	M	x	x	x

* The termination indicator must specify two factors — termination or not and measured or not. In the example, M represents a measured termination, N a non-measured termination, and blank an intermediate location.

The x's represent names of RWGs which must be supplied. Order Writing RWGs need to be specified for ISC orders only.

functions. For ISC orders, the control system must also know which of the RWGs are responsible for circuit terminations (CKLs) and whether those CKLs are measured.

5.31 The control system must provide for the manual entry of RWG and control group data. The control system optionally may provide the capability to determine the RWGs for an order from a list of items and the CWLs for each item.

E. Positive Reporting Requirements

Basic Tracking Requirements

5.32 The appropriate control group (as previously defined) is required to positively report to the control system the actual dates related to the following scheduled dates:

- ***SID***—at the order level by the WCO
- ***RID***—at the item (circuit) level by the ECO
- ***DVA***—at the item (circuit) level by the ICG
- ***SWC/DD***—at the order level [item (circuit) level for message trunks] by the ICG.

5.33 For SID and SWC/DD, the positive report includes the actual date as a data item. The actual dates are issue date (ID) and completion date (CD), respectively. For these reports, a separate record shall be kept of the date reported in addition to the actual date. The reported dates are actual issue date (AID) and completion reported date (CRD), respectively. For all other critical reporting dates, the actual date shall be the date that a positive report is made to the control system.

5.34 DD and SWC share the same actual date (CD) although they are different scheduled dates.

5.35 For ease of reporting, an order level report of RID, DVA, and SWC/DD (message trunks) may be made to the control system. This will be interpreted by the control system as simultaneously reporting actual dates for every item (circuit) on the order. Where only order level posting is allowed [ie, SID and DD (specials)], a positive report of actual dates cannot be made for each individual item.

5.36 When an actual date is before or on the same date as a scheduled date, the function has been met. When the actual date is after the scheduled date, the function is missed. Statistics on functions missed and functions met by RWGs and control groups shall be accumulated for monthly reports.

ISC Reporting

5.37 In addition to the order/item (circuit) level reporting, for ISC orders the following additional positive reports must be made by RWGs responsible for ISC measured CKLs.

- ***LID***—at the CKL level by each local order writing group in noncontrol ISC areas
- ***RID***—at the CKL level by each design group with CKLs
- ***DVA***—at the CKL level by each implementation group with CKLs
- ***DD***—at the CKL level by each implementation group with CKLs.

Note that RID CKL completions for which the design control group is locally responsible are obtained by propagating the item (circuit) level RID posting to the CKLs. In addition, DD completion at the CKL level does not indicate that the DD for the order has been met. When the term DD completion is used, it implies completion of the order (item for message trunk).

5.38 The ISC measurement plan only requires CKL reporting. Independent reports may be made for each CKL. These dates also may be reported as a unit by each RWG (ie, at the local level). The reporting of dates at the local level is interpreted by the system as simultaneously reporting for all CKLs for which the reporting group is responsible.

5.39 For SID and DD at the CKL level, the positive report includes the actual date (ID and CD, respectively) as a data item. A separate automatically generated record of the date the posting is made (AID and CRD, respectively) will also be kept. Note that these dates are all at the CKL level and may differ from the order/item level dates defined previously.

5.40 When the DD at the CKL level is missed (ie, when the posted actual date is later than the DD), a reason code indicating department responsible for missed DD must be posted. This code is the first portion (Responsibility for Missed Function) of the standard jeopardy codes presented in Table D, 5.53. The department responsible code may be posted at the same time or after CD at the CKL level is posted and before the next monthly ISC report generation. At report generation time, if no department responsible code has been entered for a CKL, the code shall be assumed to be L (Plant—Customer Facilities) for report generation purposes.

Propagation of Actual Date Postings

5.41 The positive reporting of actual dates for DD/SWC, DVA, and RID shall propagate downward from the order level to the item (circuit) level and from the item (circuit) level to the CKL level if the lower level date has not previously been posted.

5.42 The positive reporting of actual dates at the order level propagates backwards in time to earlier order level scheduled dates if the earlier date has not previously been posted. Similarly, the posting of an actual date at the item (circuit) level propagates backwards to earlier item (circuit) level dates for the item if the earlier date has not been previously posted. For example, posting CD for a message trunk item causes the posting of actual dates (equal to CD) for DVA and RID for the item if actual dates have not already been posted.

5.43 Where applicable, backward propagation and downward propagation rules shall both be applied. For example, the posting of CD for a special service at the order level shall cause the posting of actual DVA at the item (circuit) level for all items and at the CKL level for all CKLs associated with the items provided they have not been previously posted.

F. Jeopardy Reporting

5.44 A jeopardy is a condition resulting from any change in the rate of accomplishing scheduled activities which could cause the order to be completed later than the committed due date (or scheduled work completion) or prevent completion.

5.45 Manual jeopardies fall into two classes: those reported into the control system and those manually reported by an RWG to the control group for the function. Jeopardies against positively reported dates must be reported to the control system. Jeopardies for the remaining functions must be reported by the responsible group to the control group for that function. The control group will then enter a jeopardy against a positive reporting date if necessary. For example, problems at PTD for a local implementation group will be reported to the ICG which may subsequently jeopardize DD.

Properties of Jeopardies

5.46 A control system jeopardy may be associated with any scheduled date and level requiring a positive report. Independent jeopardies may be associated with DD and SWC at the item level. In addition, a jeopardy may be associated with IAD at the location level. There may be multiple jeopardies up to a fixed number associated with each date and level of reporting.

5.47 The responsible group for reporting and clearing jeopardies is the group responsible for reporting the corresponding actual dates. For IAD, the responsible group is the implementation RWG responsible for the location.

5.48 Jeopardies have two states: active and cleared. An active jeopardy against a particular date is a condition resulting when the scheduled date has been missed or is expected to be missed and before the function associated with the date has been finished. When the function has been finished and an actual date determined, all jeopardies against the scheduled date are cleared. Cleared jeopardies must be maintained by the control system for report generation purposes.

5.49 There are two general types of jeopardies: manual and automatic. Automatic jeopardies are generated by the control system.

Manual Posting of Jeopardies

5.50 Manual jeopardies may be posted against any positive report date at any time before the corresponding actual date is posted. IAD jeopardies cannot be posted if the current date is later than IAD.

5.51 Only the responsible group for a date can post a manual jeopardy against it. In addition, the WCO can post a jeopardy against DD on message trunk orders when SWC is also used.

5.52 Manual jeopardy codes have the format of one alpha—two numeric illustrated in Table D. For ISC orders, the alpha portion (Responsibility) of all manual jeopardy codes must be one of those defined in the table. The use of the standard numerics (Reason) is recommended. For other classes of orders, the use of the standard jeopardy codes also is recommended.

5.53 The posting of a manual jeopardy does not propagate to any other date or level.

5.54 The posting of a manual jeopardy for a date causes it to replace an automatic jeopardy against the date if one exists.

Posting of Automatic Jeopardies

5.55 Automatic jeopardies may exist against any date which allows a jeopardy except for IAD.

5.56 When the current date is later than the scheduled date and no jeopardy has been posted, an automatic jeopardy will be posted by the control system against any date requiring an actual date posting.

5.57 For DD, one working day is given to allow reporting time and an automatic jeopardy is not generated until the current day is greater than DD plus one working day (SRD).

Manual Clearance of Jeopardies

5.58 Any manual jeopardy can be individually cleared. An automatic jeopardy cannot be individually cleared; it can only be cleared by actual date posting or replaced by the posting of a manual jeopardy.

TABLE D

JEOPARDY CODES

RESPONSIBILITY FOR MISSED FUNCTION

A—Other Bell Operating Telephone Company
B—Design Bureau (Circuit Provision Bureau)
C—Customer
D—Independent Telephone Company
E—Engineering
F—Outside Plant Engineering
G—Business Office
H—Trunk Assignment
K—Dial Administration
L—Plant—Customer Facilities (I&R)
M—Marketing/Sales
N—Network Trunk Administration
P—PBX/CTX/STA Engineering
R—Bell Independent Relations
S—Business Services (Customer Instructions)
T—Plant—Network (includes CO)
U—Other or Unknown
W—Equipment Supplier
Z—Unassigned

REASON FOR MISSED FUNCTION

01—Change in original order due to customer
02—Customer not ready
03—No access
04—Other customer reasons
10—Incorrect or incomplete order
11—Improper DD negotiations
12—Late issuance of order
13—Incorrect distribution of order
14—DTF/AVO order with no firm DD prior to DVA
15—No PBX reservation
20—Incorrect or incomplete engineering information
21—Late engineering information
22—Unable to meet design limits
23—Assignments late
30—Central office hardwired equipment not available
31—Station equipment late or unavailable
32—Defective equipment
33—Late requisition of equipment
34—Plug-in late or unavailable
35—Trunk equipment not available (A end)
36—Trunk equipment not available (Z end)
40—Interoffice facilities not available
41—Loop facilities not available
50—Unable to meet design limits
51—Incorrect installation
52—Installation completed late
53—Circuit Control Office responsibility breakdown
54—Related order not completed
55—Work load
60—Other
61—No report received
62—Distribution system failure
63—Customer instruction omitted
90—99 Reserved for local OTC use

5.59 If the current date is later than the scheduled date, clearing the last remaining jeopardy without an actual date posting (except for IAD) causes an automatic jeopardy to be posted.

5.60 Only the control groups or RWGs who may post a manual jeopardy can clear a jeopardy.

Clearing Jeopardies Via Actual Date Posting

5.61 The posting of an actual date clears all jeopardies associated with that date.

5.62 The posting of the actual date may occur because of backward propagation from a later date or from downward propagation at the same date. Rules for actual date propagation are given in the preceding paragraphs.

Effect of Jeopardies

5.63 For report generation purposes (daily, monthly, status, etc), an active jeopardy condition for a scheduled date at the location level shall be considered to be also a jeopardy at the item (circuit) and order level, and a jeopardy at the item (circuit level shall be considered to be also a jeopardy at the order level.

G. Jeopardy Clearance Date (JCD) Processing

5.64 JCD can be used for message trunk orders. Its use for special service and design orders is not allowed.

5.65 the JCD is used to "temporarily suspend" the normal processing of an order by the control system. It is used when long-term (eg, 1 month, 3 months) delay of order completion is expected. An example of this is an order held for the construction of cable facilities.

5.66 Use of JCD inhibits the printing of manual jeopardies for the order on the daily jeopardy reports. In addition, a reminder of JCD is provided via the FDT report. After JCD, the daily jeopardy notifications resume.

Properties

5.67 JCD is associated with the earliest uncompleted positive report date at the order/item level (RID or DVA). A JCD is not allowed unless SID has been completed. A JCD is not allowed if DVA has been completed. There is only one JCD per order. The responsible group for JCD is the WCO.

Posting or Updating of JCD

5.68 Only the WCO can post or update JCD. When posted or updated, JCD must be after DD and after SWC if used.

5.69 When a JCD is posted or updated, the current JCD or a former cleared JCD is replaced and no record of the old date is retained.

5.70 Notice of new or changed JCD is produced on the OSY report (as if the JCD posting or change were an order supplement). A JCD posting or update is not considered a supplement for statistical purposes.

Ongoing Effect of JCD

5.71 All manual jeopardies for the order are suppressed on the daily reports until report production date is equal to or greater than JCD. Automatic jeopardies will continue to be printed on the daily reports until they are replaced by manual jeopardies.

5.72 The FDT report for future uncompleted functions on the order is suppressed by a JCD.

5.73 Generation of automatic jeopardies for future functions is suppressed while there is an active JCD.

5.74 The posting of supplements has no effect on JCD.

5.75 A posting of RID or DVA completion may not be made while there is an active JCD. However, manual jeopardies may still be posted.

5.76 An FDT for JCD is produced on JCD minus 5- working days and is distributed based upon the distribution rules for the earliest uncompleted function on the order. In addition, the WCO receives the FDT for JCD.

Clearing JCD

5.77 Only the WCO can manually clear a JCD. JCD is automatically cleared by the system on JCD.

5.78 The cleared JCD date is retained for information purposes but is no longer functional. If replaced by a new JCD, the cleared JCD is no longer retained.

5.79 When JCD is cleared, an FDT is produced on the next working day for all uncompleted functions which are past due. If SWC exists, an FDT for DD is not produced.

5.80 When JCD is cleared, any past due uncompleted functions which have been missed will have an automatic jeopardy posted against them unless an uncleared jeopardy already exists for the function.

5.81 The posting of CD causes the JCD to be automatically cleared.

H. Control System/Inventory System Interface

5.82 At item (order) completion posting on CRD, a notification of CD for each item is passed from the control system to the inventory system.

5.83 For each item with disconnect inventory (ie, item action code other than add or administrative), the following notification of reuse availability is sent by the control system to the inventory system.

(a) ***No IAD Jeopardy Reporting:*** On DD + 5 working days (IAD), a notification of reuse availability for each item on the order is sent if CD has been posted (ie, DD/SWC is not in jeopardy). If CD has not been posted by IAD, the notification of reuse availability for an item is sent when CD is posted for the item.

(b) ***With IAD Jeopardy Reporting Capability:*** On DD + 5 working days (IAD), a notification of reuse availability for an order item is sent if there is no IAD jeopardy for any CWL associated with the item and if CD has been posted for the item. Otherwise, the notification of reuse availability is sent on the first day after IAD on which there is no active IAD jeopardy for any CWL associated with the item and CD has been posted for the item.

REPORTS

5.84 Report requirements can be classified into three types: daily, scheduled (monthly), and other (on demand and nonscheduled). The required reports are as follows:

(a) Daily Reports:

- Functions Due Tomorrow
- Jeopardy
- Orders/Items Completed Yesterday
- Orders Issued Yesterday
- Orders Supplemented Yesterday

(b) Scheduled (Monthly) Reports

- Performance Summary (Circuit Activity Statistics)
- Jeopardy Summary
- Functions Past Due

(c) Other Reports

- Order Status Report
- Cross Reference List
- Orders by Functions and Date

5.85 The following sections detail minimum report requirements. Additional data items on the required reports or additional reports may be optionally supplied.

A. Daily

5.86 The control system will generate five types of daily reports. Daily reports will contain information on:

(a) Orders reported issued on the previous work day

(b) Orders reported supplemented on the previous work day

(c) Orders or items reported complete on the previous work day

(d) Functions due on the next work day

(e) Orders with an overdue function or a posted manual jeopardy.

5.87 Daily reports for special services, message trunks, and carrier will use the same format and will be combined on one report but separated by order class.

5.88 Minimum information content for each of the reports is specified in the following paragraphs. Additional versions of the reports may be optionally supplied.

5.89 Daily reports will be automatically transmitted to the work groups to be available at the start of each work day.

5.90 The daily report for all groups will be stored until a later report is produced and may be obtained on demand.

5.91 One or more copies of a daily report will be distributed to all work groups associated with the order. The information on the report will be divided into two portions: those orders for which the group has positive reporting responsibility and the remaining orders with which it is associated.

5.92 Each daily report will contain the following information in addition to specific data items listed separately for each report in the following sections.

- Work group receiving the report
- Report date—date the report is generated
- Report title and date for which the report is produced.

Orders Issued Yesterday Report

5.93 A report of issuance of an order is made to the WCO, ECO, and to all LWGs and LDGs associated with the order. Only those RWGs and control groups known to the system can be notified. Usually, this excludes those design and implementation RWGs associated only with intermediate CWLs determined by circuit routing.

5.94 The minimum OIY report will contain:

- Order Number
- Customer name
- Circuit/group identification of first item (if available)
- Action code for first item (if available)
- Due date
- Total number of items on the order (if available).

5.95 Within order class, the report entries should be sorted by order number.

Orders Supplemented Yesterday Report

5.96 A report of issuance of an order supplement is made to each work group associated with the order.

5.97 The minimum OSY report will contain:

- Order number (including supplement suffix)
- Customer name
- Circuit/group identification of first item (if available)
- Action code for first item (if available)
- Due date
- Total number of items on the order (if available).

5.98 Within order class, report entries should be separated into due date changes, cancellations, service modifications, other order supplements, and control system supplements. Within supplement category, entries should be sorted by order number.

Orders/Circuits Completed Yesterday Report

5.99 This report contains orders and items on which DD completion (CD) was posted into the control system yesterday.

5.100 A report of completions is made to the WCO, ECO, LWGs, and LDGs.

5.101 The minimum OCY report format will include two parts:

(a) Orders Completed Yesterday Report—Special Services

(b) Items Completed Yesterday Report—Message Trunk and Carrier.

5.102 The OCY will contain:

- Order number
- Customer name
- Completion date
- Due date
- Circuit/group identification of the first item on the order
- Total number of items on the order.

5.103 The Items Completed Yesterday Report will contain:

- Order number
- Completion date for first item
- Due date
- Circuit/group identification of first completed item
- Total items completed
- Item number of each item completed
- Order status (order completed or only part)
- Item action summaries by add, change, disconnect, and rearrange.

5.104 Within order class, report entries should be sorted by order number.

Function Due Tomorrow

5.105 This report lists functions in which the work group is involved having scheduled critical dates on the next working day except for JCD and IAD. The report for JCD is made 5-working days before the JCD date. The report for IAD is made the day after CRD.

5.106 Each RWG and control group receives as part of its report a notice of functions due as follows:

RWG OR CONTROL GROUP	FUNCTIONS
WCO	SID, DDF, JCD
LWGs, (ISC Specials Only)	LID
ECO and LDGs	AD, RID
LIGs	DVA, PTD, SWC/DD, IAD
ICG	DVA, PTD, SWC/DD

5.107 An FDT report for DLRD and CDLRD is produced for the BPOC on OCC orders.

5.108 If at the time a scheduled date is originated, the function is due today, then it will be included on the report.

5.109 The minimum format will contain:

- Order number
- Customer name
- Function due
- Date the function is due
- Circuit/group identification of the first item on the order (if available).

5.110 Within order class, all functions due will be grouped by function (ie, IAD, DD, etc) and within function by order number.

Jeopardy

5.111 This report provides advance notice to RWGs and control groups responsible for downstream functions that the order is in jeopardy. It also provides reminders to the RWG or control group responsible for each function in jeopardy.

5.112 Each RWG or control group on an order receives as part of its report a notification of jeopardies for that order as follows:

RWG OR CONTROL GROUP	JEOPARDIES
WCO	All
LWG	DD, its own LID
ECO and LDGs	RID, DVA order level RID, DVA, IAD local level for its administrative area
ICG	DVA, DD order level DVA, DD local level for its administrative area
LIGs	DVA, DD order level DVA, DD IAD local level for its administrative area

5.113 The minimum JEO report will contain:

- Order number
- Customer name
- Due date
- Function in jeopardy
- Scheduled date for function
- Control group or RWG responsible for function
- Estimated completion date, if supplied
- Item number (if available)
- Circuit/group identification (if available)
- Item action code (if available)
- Jeopardy code(s)
- CKL number on circuit and common language location—if jeopardy is at the CKL level (ISC only).

5.114 On the jeopardy report, only active jeopardies should appear. New (ie, first report appearance) jeopardies should be differentiated from old jeopardies.

5.115 Within order class, the jeopardy entries should be sorted by function; and within function by order number.

B. Scheduled

5.116 One scheduled report will be generated by the control system. It will contain three sections as follows:

(1) ***Circuit Activity Statistics***—Performance statistics for postive reporting dates reported complete during the reporting period.

(2) ***Jeopardy Statistics***—Statistical information on jeopardies associated with functions completed during the report period.

(3) ***Functions Past Due***—Statistics on the total number of functions which are pending, those functions which are past due, and the reasons for those past due.

5.117 Scheduled reports for special services and message trunks will be separate and will use different formats.

5.118 The scheduled report will be generated for any time period specified by a start and finish date of the reporting period. The report will be run monthly at a minimum corresponding to the ISC report period. Section three of the report (Functions Past Due) will contain information for only one day, ie, the day it is requested.

5.119 One or more copies of the report will be sent to each work group and each subdistrict,

district, division, area, territory, state, department, and company manager involved in the order.

5.120 Each section of the scheduled report will contain this header information:

- Report name and date(s)
- Report type
- Page number
- Name and address of group receiving report.

Special Services

5.121 The following paragraphs will pertain to reports for special services.

5.122 Each section will contain three levels of information: order class, order type, and detailed identification by order class.

5.123 The report by order class will contain the following information by orders, items, and CKLs:

- Grand totals
- ISC measured—total
- ISC measured data
- ISC measured nondata
- ISC nonmeasured
- Other special services.

5.124 The report by order type will contain the following information by orders, items, and CKLs:

- Grand totals
- ISC measured—total
- New services
- Changes to existing services
- Disconnected services
- To new location moves
- From old location moves
- Engineering initiated orders
- Coordinated cutovers
- Record only
- Inquiries.

5.125 For special services, the report by detailed identification by order class will contain the following information by orders, items, and CKLs:

- Grand totals
- ISC measured—totals
- ISC intercompany measured data
- ISC intercompany measured nondata
- ISC intercompany nonmeasured
- ISC intracompany interarea measured data
- ISC intracompany interarea measured nondata
- ISC intracompany interarea nonmeasured
- ISC intracompany intra-area measured data
- ISC intracompany intra-area measured nondata
- ISC intracompany intra-area measured
- ISC intracompany intra-area nonmeasured
- Non-ISC intracompany interarea measured
- Non-ISC intracompany interarea nonmeasured
- Non-ISC intracompany intra-area interexchange measured
- Non-ISC intracompany intra-area interexchange nonmeasured
- Non-ISC intracompany intra-area intraexchange measured
- Non-ISC intracompany intra-area intra-exchange nonmeasured

- Other.

5.126 Circuit Activity Statistics will contain the following column headings for each report type:

(a) For SID, RID, DVA, DD:

- Completion
- Percent on time
- Delay days
- CRD delay days (for DD only).

(b) For supplements:

- Quantity received
- Percent order supplements
- Quantity canceled.

5.127 Jeopardy Summary will contain the following column headings for each report type:

(a) For SID, RID, DVA, DD:

- Completion
- Percent miss
- Percent jeopardies
- Total jeopardies.

(b) For reasons (top ten):

- Jeopardy code
- Total
- Percent total.

(c) For ISC CKL missed DDs:

- Department responsible code
- Number of CKLs with DD miss.

5.128 Functions Past Due will contain the following column headings for each report type:

(a) For SID, RID, DVA, DD, IAD:

- Past due
- Percent past
- 0—5 days (past due)
- 6—10 days (past due)
- Over 10 days (past due).

Message Trunks

5.129 The following paragraphs will pertain only to reports for message trunks.

5.130 Circuit Activity Statistics and Functions Past Due will summarize performance statistics at the item level by item action code as follows:

- Grand totals
- Primary intertoll
- Secondary intertoll
- Interlocal
- Toll access—operator
- Toll access—machine
- Toll completing
- Auxiliary.

5.131 Jeopardy Summary will present statistical information at the item level for grand totals and for the item action types.

- Adds
- Changes
- Disconnects
- Rearranges.

5.132 Circuit Activity Statistics will contain the following column headings:

(a) For SID, RID, DVA, SWC, DD:

- Completion
- Percent on time
- Average miss
- Average CRD (for DD only).

5.133 Jeopardy Summary will contain the following column headings:

(a) For SID, RID, DVA, SWC, DD:

- Completion
- Percent miss
- Percent jeopardy
- Total jeopardies.

(b) For reasons (top ten):

- Jeopardy code
- Total
- Percent total.

5.134 Functions Past Due will contain the following headings:

(a) For SID, RID, DVA, SWC, DD, IAD:

- Past due
- Percent past
- 0—10 days (past due)
- 11—20 days (past due)
- Over 20 days (past due).

C. Other

5.135 Three additional reports will be generated by the control system. They are:

(a) Current order status information for each item and its associated ISC measured CKLs, including jeopardy codes for CKLs failing to meet scheduled completion dates.

(b) A summary listing of status information associated with a project, customer, or individual orders currently in process.

(c) A listing of all orders associated with a specified function for which a work group has responsibility.

Any work group can obtain one of these reports on request.

5.136 The Order Status Report will contain the following information:

- (Primary) order number
- Related order number
- Customer
- Sales/originator
- Current due date
- Original due date
- Application date
- Order issued date
- Order status
- Order type
- Control group designations: WCO, ECO, ICG
- Objective dates: SID, AD, RID, DVA, PTD, SWC
- Remarks
- Item number

- Circuit/group ID of item
- Item action code
- Function for which a jeopardy or completion exists
- Jeopardy code/completion date
- CKL number for ISC measured CKLs
- Location of CKL
- Design and implementation RWG code responsible for ISC measured CKL data.

5.137 The Cross-Reference List Report will contain the following information:

- Order number
- Latest supplement history record identification
- Due date
- Status
- Completion date (if applicable).

5.138 The cross-reference list can be obtained using either the customer name or the related order number as the key. The report lists all orders having the same customer name or the same related order number, whichever is specified.

5.139 Orders by Function and Data Report will contain the following information for the requesting RWG or control group:

- For period (from and to date boundaries) the report covers
- Functions selected (includes JCD)
- Data base date
- Order number
- Customer name
- APP, SID, AD, RID, DVA, PTD, SWC, DD
- WCO, ECO, ICG
- Item number
- Circuit/group identification
- Item action code
- Circuit status.

The following additional information is required for ISC orders only:

- Circuit location number for ISC measured CKLs
- Circuit location identification
- ISC reporting office (LWG)
- Implementation RWG (LIG) for the CKL
- Design RWG (LDG) for the CKL.

INTRACONTROL

5.140 The following requirements apply to a control system for intracontrol system orders.

A. Order Tracking Initiation

5.141 The order tracking initiation inputs are as follows:

(a) Order Level Data:

- Primary order number
- Requester (customer, trunk servicer, or other)
- Control groups—WCO, ECO, and ICG
- OWGs associated with each control group
- Order class
- Special service measurement classification for statistical reports (DOC code)
- APP and DD
- SWC if applicable

- Intermediate scheduled dates — SID, LID, EIRD, DIRD, CDLRD, AD, RID, DVA, PTD
- DDF indicator if applicable
- Trunk group ID (message trunk orders only)
- Action code(s) and quantity affected (msg only).

(b) Item Level Data:

- Item number
- Circuit/group ID
- Item action code.

(c) Location Level Data:

- CWL name in CLLI format (optional)
- CKL number (if applicable)
- LDG responsible for the CWL
- LIG responsible for the CWL
- Design OWGs for the CWL
- Implementation OWGs for the CWL.

(d) ISC CKL Measurement Data:

- CKL number as specified on the ISC/USO
- Performance plan indicator for CKL
- LWG responsible for the CKL.

5.142 Portions of the preceding information (eg, the intermediate scheduled dates and/or responsible groups) optionally may be determined by the control system from other parts of the input as previously described.

5.143 The permissible action codes to be used by the control system are the same as those used on WORD/CLRC (see Part 2.)

5.144 The minimum data required to initiate tracking for an order is the order level data defined previously. Subsequent entries may be made to provide the design oriented data (the previous item and CWL level data).

5.145 For ISC orders, the control system must be able to accept the ISC CKL measurement initiation data at the same time as the order level data. This data initializes the ISC tracking for SID/LID reporting on CKLs.

B. Supplemental Input of RWG Data

5.146 At the beginning of the design function, any additional RWGs (LDGs and LIGs) determined as a result of circuit routing must be input into the control system. This optionally may be done by inputting all the CWLs for the items from which the design and implementation groups will be computed by the control system.

C. Order Supplements

5.147 Order supplements (for USOs are called Correction Orders or Cancellation Orders) fall into four classes:

(a) ***Modify***—those which modify or add items

(b) ***Cancel***—those which cancel one or more items

(c) ***Reschedule***—those which reschedule future functions but do not affect functions which have been met or missed

(d) ***Other***—those which do not change item activity requirements or the order schedule.

5.148 No order supplements can be entered into the system after order completion has been posted. At input, the type of supplement (Modify, Cancel, Reschedule, or Other) must be entered. A new supplement suffix for the order number must be entered with the supplement data. All supplements appear on the OSY report.

5.149 Those in the Modify category require the rescheduling and rereporting of all functions. All previous actual dates and jeopardies are removed from active status. Functions made and functions missed for the previously reported functions shall be counted based on the information removed. Jeopardies previously reported must be retained for the jeopardy analysis. New objective dates may be entered for each of the scheduled dates

except APP. Each scheduled date shall provide a new opportunity to meet or miss each function.

5.150 When one or more items are canceled, all functions must be rereported exactly as in the Modify case above. In addition, the item action code for canceled items is changed to K.

5.151 Supplements to change SWC/DD without changing activity requirements (eg, a firm DD on a DDF order) fall into the Reschedule category. The new SWC/DD cannot be earlier than the present SWC/DD. Scheduled dates which have not been completed for the order may be reestablished by manual entry of new dates. Scheduled dates for functions which have been completed for all items on the order may not be changed.

5.152 Supplements which fall into the Other category have no impact on control system except that the existence of the supplement is recorded.

D. WORD/CLRC Supplements

5.153 The item number used by the control system includes the supplement suffix indicating the latest version of WORD/CLRC. All control system status posting using the item number must include the latest supplement suffix. Otherwise, the control system must reject the posting. The control system must provide the capability to update the item supplement suffix for any item on an order. This update capability must be restricted to the ECO.

E. Order Status Tracking and Reports

5.154 The order status is maintained in the form of scheduled dates, actual dates, reported dates, and jeopardies. Continuous updates to the control system may be made in the form of actual date posting, manual jeopardy posting, and jeopardy clearance inputs. The rules for processing these inputs to establish order status are previously specified.

5.155 The information input into the control system for status reporting by an RWG or control group is as follows:

(a) Actual Date Posting:

- Name of RWG or control group
- Scheduled date name
- Level of posting
- Primary order number
- Item number (item and location level postings)
- CWL name (optionally for location level posting)
- Actual Date (SWC/DD, SID, and LID only).

(b) Jeopardy Posting:

- Name of RWG or control group
- Scheduled date name
- Level of posting
- Primary order number
- Item number (item and location level postings)
- CWL name (optionally for location level posting)
- Jeopardy code.

(c) Jeopardy Clearance Posting:

- Name of RWG or control group
- Scheduled date name
- Level of posting
- Primary order number
- Item number (item and location level postings)
- CWL name (optionally for location level posting)
- Jeopardy code to be cleared.

5.156 Before the beginning of every work day, the daily reports are produced based on the current status including the posting of automatic jeopardies.

F. Correction of Posting Errors

5.157 Correction of posting errors (actual dates, department responsible for missed DD on CKLs, and replacement of automatic jeopardy codes) into the control system may be made at any time after the posting is made and before the scheduled (monthly) statistical reports are produced (including after the order has been completed). Control system corrections are not considered to be order supplements. This capability for control system correction shall be limited to a small number of authorized users.

INTERCONTROL

5.158 When an order traverses more than one control system, the systems must coordinate to control the order. Each control system must be able to access the order by its primary order number.

5.159 Each control system must maintain order and item (circuit) level data (scheduled dates, actual dates, jeopardies, reported dates, primary order number, control office data, etc) redundantly and must maintain the local level data within its own coverage boundary. For the functions which must be coordinated between systems [tracking initiation, supplement posting, status posting for scheduled dates at the order/item (circuit) level], the control system must determine whether it is a secondary system for that function. The determination of secondary systems is made based upon whether the group responsible for specifying the information being entered is within the control systems boundaries. For all intersystem functions, the data specification responsibility belongs to one of the control groups—WCO, ECO, or ICG.

5.160 To handle intersystem orders, responsibility is established for the entry of order/item (circuit) level data into secondary control systems. The designation of this responsibility is discussed in Part 4.

A. Order Tracking Initiation

5.161 Order tracking must be initiated in each control system involved in the order. The order and item level initiation data defined previously must be identically entered in all systems. If one of the three control groups is outside the coverage of the control system, the name entered for the control group must indicate which control system serves the group as well as identifying the particular group. Location level data need not be entered for locations outside the control systems coverage.

5.162 An identification of the control system covering terminations outside the system boundary may be optionally entered into the WCOs system. This option is required when a machine-to-machine interface is available for order tracking initiation in other systems.

5.163 The control system covering the group responsible for writing the primary order (WCO) may automatically supply or compute any part of the order and item (circuit) level required inputs (ie, scheduled dates). However, in non-WCO control systems all item (circuit) and order level data must be manually input. This prohibits the automatic computation from producing different results in a second system.

B. Tracking Initiation in Intermediate Control Systems

5.164 When the design control group (ECO) does high level routing, intermediate offices may be specified which are covered by control systems other than those initially determined using circuit termination information. In that case, control must be initiated in the intermediate systems using the same order and item (circuit) level data as described above for non-WCO systems with terminations.

5.165 The ECO as a result of high level routing determines whether additional control systems are involved. If so, the identification of these additional systems may be optionally input into its control system. In the case where a machine-to-machine interface exists with other involved systems, the identity of those systems must be known to the system serving the ECO.

C. Supplemental Input of RWG Data

5.166 Detail routing for each circuit may also determine additional design and implementation groups in all systems. The detail RWG data applicable to each control system is only input into that system. The additional RWGs may be obtained in each system by inputting the intermediate CWLs determined by routing and having the control system determine them.

D. Order Supplements

5.167 Order supplement inputs must be coordinated following the same rules as those for coordinating order initiation. Inputs are made only for those data items which change.

5.168 Supplement information must be identically input into all control systems. Again, non-WCO systems may not automatically compute any of the order and item (circuit) level data.

E. WORD/CLRC Supplements

5.169 Each control system must have the same item numbers, including supplement suffix. Consequently, when WORD/CLRC is supplemented, the new item supplement suffix must be entered into each system. In non-ECO systems, any LDG will be allowed to update the item supplement suffix.

F. Order Status Tracking

5.170 For all functions except DD, order and item (circuit) level status changes (actual date posting, jeopardy posting, or jeopardy clearance) must be posted only into the control system covering the control group for that function. DD jeopardies, and DD jeopardy clearance must be posted into all systems. However, DD completion (CD) is not required to be posted into non-ICG systems, but rather it is automatically posted in systems other than the one supporting the ICG.

5.171 In non-ICG control systems, the posting of DD completion is done automatically on DD plus 2- working days unless a jeopardy against DD has been manually posted or DD completion has already been posted. When automatically posted, CD is set equal to DD. The design groups are the only work groups who can post order and item (circuit) level DD status into control systems other than the one serving the ICG.

5.172 For order and item (circuit) level functions other than DD, manual status posting may be made into a control system other than the one serving the control group responsible for the function. These postings may be made by any control group or RWG associated with the order. No automatic jeopardy will be produced for order/item (circuit) level dates for which a control group served by another system is responsible. When a secondary control system is connected by a machine-to-machine link to the responsible control system, the order and item (circuit) level postings optionally may be propagated and posted into the secondary control system using the interface.

G. Reports

5.173 Each control system produces its normal reports for all data in its data base except those reports for a control group which is another system (eg, and FDT report for item (circuit) or order level functions for which another system is responsible).

H. Interfaces With Inventory Control System and Supply Systems

5.174 In the multicontrol system case, the interface between the control system and the inventory system is identical to the single system case defined previously. However, the inventory movement information transmitted by the control system only applies to the portion of the item covered by the system.

5.175 The interface between the control system and a supply system remains the same in the multicontrol system environment since it functions on the local level.

6. GLOSSARY

ACOLI (Advance Circuit Order and Layout Information)—Expedient information issued by the design group which contains sufficient detail to enable implementation to perform its functions prior to WORD/CLRC

issuance. An ACOLI is necessary when WORD/CLRC cannot be distributed in time to meet implementation requirements.

ADNet (Administrative Network)—The Bell System official business teletypewriter network used for the purpose of distributing administrative messages and ISC documents. This network is administered by Long Lines.

B-IR (Bell-Independent Relations)—The group within an operating company which has the responsibility for interfacing between the Bell System and independent companies.

Circuit Termination—A circuit work location at which a circuit terminates.

CKL (Circuit Location)—For ISC orders, identification of a circuit termination at each customer address on a given circuit subject to the following interpretations:

(a) A CKL is assigned to each service name on each circuit terminating at the same service address.

(b) Additional station terminations at the same service address are designated as termination (TRM), not additional CKLs.

(c) Large office buildings, airports, military bases, or large industrial sites are considered one CKL if only one address identifies the location. Central office loops that may be required to serve additional stations at one CKL are not a factor—those additional stations are designated TRM, not CKL.

(d) The open (central office) end of a Foreign Exchange or WATS service is considered a CKL.

(e) The switching location of a service terminating in switches (such as: CCSA access lines and trunks) is considered a CKL.

CKLs also exist on local USOs, but their precise definition is not necessary for ADS. In this practice, CKL alone will be used to mean ISC CKL.

CLR (Circuit Layout Record)—The records created and maintained by the CPB for those circuits, groups, and derived facilities which it designs.

CLRC (Circuit Layout Record Card)—The card, used by Central Office and Station Installation Forces to install the circuit, which contains information pertinent to the circuit.

CPB (Circuit Provision Bureau)—The group responsible for:

(a) Coordination of work with noncolocated groups (loop assignment, dial administration, station engineering, etc)

(b) Design of special service, message trunk, carrier, and design orders

(c) Assignment and/or ordering of all equipment (switching, CO, station, etc) and facilities

(d) Circuit record preparation and distribution

(e) Inventory and record update.

Critical Dates—Specific dates in the life of an order established for internal order control and progress monitoring purposes based upon the type, complexity, and geographic extent of service.

APP (Application Date)—The date on which the requester of the order provides a firm commitment and sufficient information to proceed with writing the primary order.

SID (Scheduled Issue Date)—The date that the primary order document is to enter the order distribution system. For ISC, the date the ISC/USO is scheduled to be transmitted from the originating control ISC team to other ISC teams and/or work locations. SID is a positive report date to the control system.

LID (Local Issue Date)—The date on which the local orders are scheduled to be issued. LID is established only for ISC orders and is a positive report date to the control system.

EIRD (Engineering Information Report Date)—The date on which the design control group should have received an EIR from local control design groups.

CEIRD (Confirming EIR Date)—The date on which all local design groups are to receive a confirming report from the design control group. A Confirming Engineering Information Report is a report which accepts or changes the local design groups original EIR.

DLRD—On an OCC order, the date by which the Design Layout Report (DLR) or Termination Layout Report (TLR) must be forwarded to the designed OCC representative.

CDLRD—On an OCC order, the date by which the Confirming Design Layout Report (CDLR) should be received by the Bell Point of Contact (BPOC).

AD (Assignment Date)—The date which information required to design the service is to be available. All required facilities and equipment (including plug-ins) are to be reserved, assigned, and/or ordered.

RRD (Requisition Received Date)—The date that the requisition for material and equipment is scheduled to be received by the supplier. The RRD is assigned on projects and close supply coordination cases when RRD and AD do not coincide.

RID (Records Issue Date)—The date on which the CPB is to send all design and assignment information (WORD/CLRC, station diagrams, etc) to the central office and station installation forces. RID is a positive report date to the control system.

RAD (Records Arrival Date)—The date on which the work groups associated with implementation functions (central office, station installation forces, etc) are to have received all design and assignment information. This is a minimum of 1- working day prior to DVA.

MOJ (Material on Job Date)—The date on which all the equipment (including plug-ins) and hardware is to be received by the central office and station installation forces. This date is 1- working day prior to DVA.

DVA (Designed, Verified, and Assigned Date)—The date on which central office and station installation forces are to verify and report whether or not everything required for the installation is available as prescribed by the service order and WORD/CLRC. DVA is a positive report date to the control system.

PTD (Plant Test Date)—The date on which overall testing is to be started, and installation of all facilities and equipment and associated tests on each segment of the circuit must be completed.

SWC (Scheduled Work Completion Date)—The date the order is scheduled to be completed and turned up for service (used for message trunk and carrier orders only). When used, SWC is a positive report date to the control system.

DD (Due Date)—For special services, the date that turn-up, change, or denial (in the case of disconnects) of service is required to be provided to the customer. For message trunks, the DD is the service affecting date. When SWC is not used, DD is a positive report date to the control system.

SRD (Scheduled Report Date)—The latest date on which the report of order/item completion is scheduled to be made. SRD is DD plus 1- working day.

IAD (Inventory Available Date)—The date on which disconnected equipment and facilities are to be made available for reuse. When a control system is used, IAD is 5- working days after DD completion is reported to the system. If a control system is not used, completion reporting is assumed to occur on DD; and IAD is DD plus 5- working days.

CRO (Complete With Related Order)—An entry on the USO that indicates that the order is to be completed simultaneously with a related order.

CWL (Circuit Work Location)—Any work location (service address for customer termination or central office for intermediate locations and the remaining terminations) associated with a given circuit. CWLs are identified using the Common Language Location Identification (CLLI) format.

DTF (Date To Follow)—On an ISC order involving an independent company, the code which follows DD to convey that a firm DD is being negotiated and will follow on a USO correction order.

EIR (Engineering Information Report)—A report from a local control design group to the design control group for the purpose of design coordination, which includes minimum design data pertaining to equipment and facility assignments, requisition numbers, and station termination equipment.

ISC (Intercompany Services Coordination Plan)—A set of standard interdepartmental procedures, an interval guide, and a measurement plan for all intra- and interarea data orders as well as all other interarea special service orders.

ISC Team—An interdepartmental group established for coordinating ISC orders. The control ISC team is responsible for the overall coordination of the ISC order process. Local control ISC teams are designated for other ISC areas which have one or more CKLs.

Jeopardy—A condition resulting from any change(s) in the rate of accomplishing scheduled activities which could cause the order to be completed later than the DD or the scheduled work completion date.

LECO (Local Engineering Control Office)—The office responsible for the design of the portion of the circuit within its territory. LECO is only defined for ISC and is an LDG with at least one CKL.

LL (Long Lines)—The operating department of AT&T.

OCC (Other Common Carriers)—Specialized Common Carriers, Domestic and International Record Carriers, and Domestic Satellite Carriers engaged in providing such private line voice, data, audio or video services, or other services as such carriers may be authorized by the FCC to provide.

Operating Area—The geographic administrative areas of an OTC. Some companies may contain operating areas that have two or more smaller entities of a particular department. Reference Section 751-100-365.

Order—A document representing a service request. The term "order" is not used for work documents such as WORD/CLRC.

ISC/USO (Intercompany Service Coordination/Universal Service Order)—The Universal Service Order format to be used for ISC orders. This term is used to distinguish it from the local translated order (USO) associated with it.

USO (Universal Service Order)—The document initiated by the negotiator, authorizing the implementation, modification, or discontinuance of a tariffed customer service.

BSTO (Business Services Traffic Order)—The document initiated by Business Services as a result of traffic data analysis to add, disconnect, or change circuits on an existing centrex trunk group in order to maintain a standard of service as agreed to with the customer.

Design Services Order—The document, initiated by the CPB, to add, change, or disconnect special service circuits for company services (eg, alarm, control, test, measurement, etc). Services provided under these orders are nontariffed.

S/S Network Routing Order—An order to change CCSA/SSN routing at one or more locations. These orders do not affect the design of individual CCSA/SSN trunk groups. This type of order does not fall under ADS procedures.

MTO (Message Trunk Order)—The document, initiated by Trunk Administration, to add, change, or disconnect circuits in a trunk group.

Network Routing Order—An order to change the message network routing at one or more locations. These orders do not affect the design of individual message trunks. This type of order does not fall under ADS procedures.

Design Order—Orders issued by a design group (CPB, Network Administration, etc) to rearrange or modify existing circuits or groups. These were formally known as engineering orders or Engineering Service Orders (ESOs).

OTC (Operating Telephone Company)—The associated companies, including Long Lines, of the Bell System.

PCO (Plant Control Office)—The plant office which is responsible for the overall maintenance and service availability of a circuit and for the coordination of all activities which may have an effect on these factors. For special service adds and disconnects and for most other orders, the PCO is the same as the ICG.

Primary Order—The order document written as a result of a service request. It is the first document written or is the one which most completely represents the total service requirement.

Primary Order Number—The order number associated with the primary order.

RRO (Responsible Reporting Office)—For ISC orders, an RWG with a measured CKL (ie, who must make a positive report to the control system).

SECO (Station Engineering Control Office)—On an ISC order with two CKLs, the office which has station design coordination responsibility for provision of equipment for one of the circuit locations and overall station compatibility.

Supplement—A modification of an order to correct, change, or cancel the original order. For special service USOs and ISC/USOs, the term Correction Order of Cancellation Order is used.

TGSN (Trunk Group Serial Number)—A Bell System unique identification for message trunk groups that is system generated within either TIRKS or TNDS. It has a format of two alpha and six numeric characters

and is frequently called the 2-6 code. It serves as a short-hand access for group information and as a more stable identifier than common language.

Trunk Administration Group—The group responsible for servicing, forecasting, and routing of the message network. It is the only group which can add, disconnect, or change the name of message trunks or groups.

USOC (Uniform Service Order Code)—An alphanumeric code used to identify a tariff item on a USO.

WORD (Work Order Record and Details)—The document used to convey layout and test information from the design control group (ECO) to the central office and station installation forces responsible for installation and maintenance. WORD is the standard for mechanized system as per Section 682-400-010.

Work Group—A group (or group aided by a mechanized system) which is involved in processing the order. Some work groups are assigned control responsibility and/or local ADS administrative responsibility.

Control Group—A group which is responsible for the performance of an overall function (order writing, design, or implementation) in the provisioning of service.

WCO (Writing Control Office)—The group responsible for originating the primary order.

ECO (Engineering Control Office)—The group which is responsible for overall design coordination of all circuits on an order. It is responsible for issuing the WORD/CLRC.

ICG (Implementation Control Group)—The plant group designated as control for the implementation of an order. It is responsible for coordinating overall testing and reporting circuit completion.

RWG (Responsible Work Group)—A group which has responsibility for the performance of local work functions in the provision of service. An RWG is specified by the function (writing, design, or implementation) for which it is responsible, the type of service which it handles, and the CWLs which it covers. Only those RWGs responsible at ISC measured CKLs are required to positively report to the control system. All RWGs receive order status information from the control system in the form of reports.

LWG (Local Writing Group)—A group which has responsibility for writing local translated orders. LWGs are only designated for ISC orders.

LDG (Local Design Group)—A group which is responsible for assignment on the portion of a circuit/group within its territory.

LIG (Local Implementation Group)—A group which is responsible for implementation of an order at one or more CWLs.

OWG (Other Work Group)—A group which performs administrative or work functions for which a responsible work group or control group is responsible.